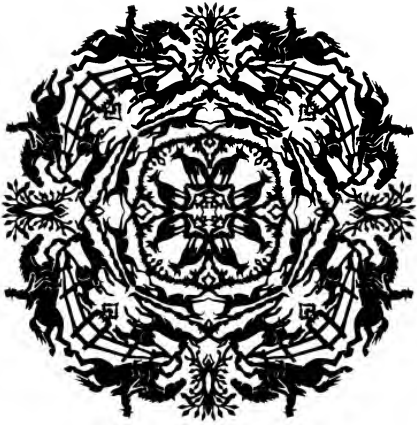
THE HORSE

BY

O'HANLON, FERMOY



JOHN A. SEAVERNS

THE HORSE

AND

ITS DISEASES:

BY

JEREMIAH O'HANLON,

Late of the Royal Horse Artillery.

CORK:

HENRY & COGHLAN, 35 & 36, GEORGE'S STREET

1864.

Price, Two Shillings and Sixpence.

TO

The Parish of Donoughmore,

WITH GREAT RESPECT,

THIS BOOK IS DEDICATED

BY

THE AUTHOR.

TESTIMONIALS.

Poona, East India, October, 1851.

My dear Farrier Major—I have much pleasure in forwarding the amount of your bill. I beg leave to return you thanks for the rapid and effectual cure of my Horse, which at one time I thought hopeless. I consider that the vicinity of Poona is very lucky in having so skilful a man within its call.—Yours, &c.,

(Signed,) W. WEBB,
Civil Service.

Poona, East India, July 12*th*, 1852.

Mr. O'Hanlon—Sir, I enclose the amount of your bill, and beg to tender my best thanks for the great skill and judgment displayed by you in curing my Horse, which I thought would never have been serviceable any more. I intend to make it known to your Commanding Officer.—Yours, &c.,

(Signed,) WM. EDWARDS,
Staff Surgeon.

Poona, East India, Dec. 6*th*, 1854.

This is to certify that Farrier Major O'Hanlon operated on a Horse of mine afflicted with rupture. He performed the operation in a most skilful manner in the presence of several Doctors. The Horse was perfectly cured in a very short time, and fit for work. I submit this testimonial in grateful acknowledgment of his abilities as a Veterinary practitioner.

(Signed,) JOHN MILES,
Lieut. 3rd Bombay Regiment.

Poona, June 18th, 1855.

I certify that Farrier Major O'Hanlon attended this morning, and operated on my Horse that had a rupture of the intestines. He performed the operation entirely to my satisfaction. I therefore strongly recommend him as a most eminent and skilful Horse Doctor.

(Signed,) ALEXANDER BARNES,
Surgeon, 3rd Bombay Regiment.

Poona, 14th July, 1855.

I hereby certify that I have engaged Farrier Major O'Hanlon on several occasions, in order to attend my Horses during their illness, and he has always displayed an uncommon amount of knowledge and skill in their treatment. I therefore consider that he is worthy of the patronage of any gentleman who may require his services. I shall be happy to hear of his welfare in England, where he is about to establish himself as a Veterinary Practioner when he leaves the Service.

(Signed,) W. DYKE,
Assistant Adjutant-General.

Poona, Nov. 14th, 1855.

I certify that Farrier Major O'Hanlon has proved himself a superior Horse Doctor, for the last nine years, during which time he held the above rank in this Regiment. He was also very attentive, sober, and well disposed.

(Signed,) J. TURNER,
Assistant Surgeon, Horse Artillery.

Poona, Nov. 27th, 1855.

I have known Farrier Major O'Hanlon for a period of six years, and have great pleasure in testifying that he is a trustworthy, sober, and respectable man; and can also state that he exhibits an uncommon amount of knowledge and skill in his capacity as Farrier Major. It will ever afford me great pleasure to hear of his welfare, in whatever quarter his abilities may be required.

(Signed,) J. REID,
Lieutenant, Royal Horse Artillery.

Poona, Dec. 4th, 1855.

I have much pleasure in stating that I have employed Farrier Major O'Hanlon several times these last two years, whenever I had

anything the matter with my Horses that required his professional skill, I have always found him very attentive and skilful. I can, therefore, strongly recommend him as a most superior Horse Doctor and should be glad to hear of his prosperity.

(Signed,) EDW. CAMPBELL,
Captain 3rd Bombay Regiment.

Poona, December 5th, 1855.

This is to certify that I have known Farrier Major O'Hanlon of this Regiment for the last nine years, during which time he has proved himself on every occasion very skilful, trustworthy, and well disposed.

(Signed,) J. TURNBULL,
Major Royal Horse Artillery.

Fermoy, May, 1861.

This is to certify that Farrier Major O'Hanlon has had charge of my Horses for the last two years, during which time they have been infected on several occasions with *distemper*, and other inveterate diseases, which were speedily arrested by the great skill and judgment of Mr. O'Hanlon. He also performed a most skilful operation on a dog belonging to me, that had its head broken by a kick from a horse. The dog was rendered perfectly useless, had frequent attacks of the *staggers*, often occurring two or three times in a day. Mr. O'Hanlon introduced a silver plate in the affected part, after having taken part of the fractured bone away. I am happy to say that the dog is now perfectly recovered. I consider this a most astonishing cure, and in every instance he has shown the same tact and judgment in applying a remedy. I have, therefore, great pleasure in recommending Mr. O'Hanlon to the notice of those gentlemen who may require his services, in full confidence that he will give every satisfaction.

(Signed,) R. NEVILLE,
Major 11th Regiment.

Rathbarry, near Fermoy, May 10th, 1861.

I hereby certify that Mr. O'Hanlon cured a Mare of mine that was blind over three years. I had several of his profession attending her, without success. I was advised to make application to Mr. O'Hanlon; I am glad I did so—he completely cured her in a very short time, and her sight is now as good as ever.

(Signed,) JOHN FOOHY.

Fermoy, June, 1861.

It affords me great pleasure to add my testimony as to the skill of Mr. O'Hanlon, of Fermoy. I had some very bad cases of distemper in my stables, which were soon arrested by the remedies employed by Mr. O'Hanlon; I therefore strongly recommend him as a most skilful man in the diseases of a Horse, also very reputable in his private life.

(Signed,) T. HACKETT,
Captain, 28th Regiment.

Fermoy, 1st December, 1862.

I certify that I have known Mr. O'Hanlon ever since he has been in Fermoy; he has always had charge of my Horses, and I consider him a Farrier of great abilities.

(Signed,) R. A. DANIELL,
Barrack Master.

Ballymacphilip, near Ballyhooly, Dec., 1862.

I certify that Mr. O'Hanlon, of Fermoy, operated on a Colt of mine that was ruptured through the ignorance of a Sow Gelder who attempted to castrate him. Mr. O'Hanlon opened the Colt's belly, in the presence of several gentlemen, and cut about half-a-yard of his gut away that looked very black. The Colt was perfectly well in three weeks.

JEREMIAH LINEHAN.

Fermoy, 2nd Dec. 1862.

Mr. O'Hanlon (late Farrier Major of the Royal Horse Artillery,) has, ever since his arrival in Fermoy, attended my Horses and shod them. Mr. O'Hanlon is a Veterinary Surgeon of great ability, and much experience. I never met a more civil or obliging man, at all times ready, and equal to any emergency, applying his remedies with promptitude, decision, and success. He bears the highest character in his private life, and is much respected by all who have employed him. I might add, the shoeing of Horses carried out under his immediate superintendence, is always well executed.

(Signed,) T. LYNDEN BELL,
Major 18th Depot Battalion.

Fermoy, 3rd Dec., 1862.

I have much pleasure in being able to add my testimony to that of many other gentlemen, as to the great skill, attention, and in all

respects excellent conduct of Mr. O'Hanlon, late Farrier Major in the Royal Horse Artillery, and now practising as a Veterinary Surgeon in Fermoy, and with whom I have been acquainted over a period of twelve months, during which time I had some casualties in my stables, which enables me to recommend him strongly, either to treat, or look after sick or disabled Horses. His system of shoeing is the best I have seen in this country, and I am confident whoever calls on Mr. O'Hanlon for his services, will never regret having done so.

(Signed,) EDWARD HARNETT,
Captain 11th Hussars.

Licklash Castle, 2nd January, 1863.

Mr. O'Hanlon has had the shoeing and Medical treatment of my Horses since my arrival at Licklash Castle, and I can safely say that he is very skilful in the diseases of Horses. His system of shoeing is superior to any I have seen.

(Signed,) W. LAW OGILBY.

Careysville, 6th Jan., 1863.

It affords me much pleasure in being able to bear testimony to the efficiency and skill of Mr. O'Hanlon, late Farrier Major in the Royal Horse Artillery. The judicious, decisive, and successful treatment adopted by him with regard to a sick Mare of mine, needs no other comment than that I am enabled to say, had I not recourse to his services, the mare must have sunk in a few hours with the complaint under which she laboured. I consider Mr. O'Hanlon a perfect master of his profession, and since my Horses have been sent to his shoeing department, I have found the greatest improvement under his superintendence. I have known Mr. O'Hanlon since he came to Fermoy, and never found a more obliging or attentive person in his capacity, and, in my opinion, Fermoy and its vicinity, and especially those who regard the efficiency of so valuable an animal as the Horse, are favoured in having so eminent a person residing within their call, as experience will prove to those who may be pleased to employ him.

(Signed,) E. K. CAREY, J.P.

Mocallop, 7th Jan., 1863.

Mr. O'Hanlon—Sir, I beg to inform you that I feel grateful to you for having so effectually cured my Horse of blindness of a very long standing.—I remain, yours,

FRANCIS DALY.

Fermoy, 22nd January, 1863.

Mr. O'Hanlon has been the greatest portion of the last nine months attending my Horses, and I could not wish for more judicious treatment than he adopted. He has proved himself to understand his business thoroughly. I would, therefore, recommend any one who requires the services of a Veterinary Surgeon to call on Mr. O'Hanlon.

(Signed,) FRANCIS COGAN,
Staff Surgeon 18th Depot Battn.

Fermoy, 18th January, 1863.

I have great pleasure in being able to testify to the great skill of Mr. O'Hanlon, in curing the diseases of Horses; I have known him a long time, and employed him in the capacity of Farrier Major and Veterinary Surgeon. I have frequently had occasion to consult him about my Horses, one of which had a disease about two months, his careful and prompt attention was the means of saving my Horse. His system of shoeing is certainly superior to any I have seen since my arrival in Ireland.

(Signed,) EDMUND SMITH,
Captain 95th Regiment.

Fermoy, 26th January, 1863.

I have had long acquaintance with Mr. O'Hanlon, (late Farrier Major in the Royal Horse Artillery,) and found him satisfactory in the treatment of Horses. I can testify to the great improvement in my Horses feet under his treatment. I may also state that I have ever found Mr. O'Hanlon, civil, obliging, and careful in his duties.

(Signed,) RICHARD WHITE,
Medical Officer, Fermoy.

Fermoy, 28th January, 1863.

I have known Mr. O'Hanlon, (late Farrier Major in the Royal Horse Artillery,) since I have been in Fermoy, he has had charge of my Horses for a period of eighteen months. I consider him fully competent in every branch of the Veterinary Art, and testify to the precision and despatch with which the Farriery department is conducted under his immediate superintendence. One of my Horses recently exhibited symptoms of farcy, which were promptly arrested by the remedies employed by Mr. O'Hanlon.

(Signed.) J. J. HILL CARBERRY
44th Regiment.

Fermoy, January 31st, 1863.

Mr. O'Hanlon has attended my Horses since my arrival in Fermoy, he has proved himself a Veterinary Surgeon of great experience and ability; he also bears the highest character in his private life. His system of shoeing is decidedly the best I have seen in this country.

(Signed,) A. B. C. DREWE,
Late 95th Regiment.

Fermoy, 4th February, 1863.

I have known Mr. O'Hanlon (late Farrier Major Royal Horse Artillery,) since he first commenced business as a Veterinary Surgeon in Fermoy, and was one of the first persons to send him horses. I have much pleasure in testifying as to his ability and attention, and have ever found him most civil and obliging. He performed a very difficult Surgical operation on a mare of mine, in a skilful and successful manner. My horses have been well and carefully shod under his superintendence.

(Signed,) E. FAIRTLOUGH,
Captain 14th Regiment

Ballinalack, near Rathcormack, May, 1863.

I hereby certify that Mr. O'Hanlon cured a Mare of mine which was suffering from debility and liver complaint, for nearly twelve months. I am also proud to acknowledge that I applied to various Practitioners in the Veterinary art, without success, and the Mare was pronounced incurable by many of the Professionals above alluded to, as not likely to be of any further use. I was induced to make application to Mr. O'Hanlon, and in the short space of twenty-seven days, the Mare was perfectly cured, and fit to resume her ordinary work with perfect ease. I have much pleasure in sending this testimonial to Mr. O'Hanlon, in acknowledgement of his superior skill as a Veterinary Practitioner.

MARTIN DALY.

Ballyclough, June 1863.

I have much pleasure in testifying to the able and skilful manner in which Mr. O'Hanlon of Fermoy operated on a Horse of mine that was blind more than twelve months. I applied to several Veterinary Surgeons without the slightest chance of a cure being accomplished on my Horse. I was then advised to try Mr. O'Hanlon, being informed of some wonderful operations that he performed with success. It would be difficult as well as tedious to relate the particulars respecting this great cure which he performed on my Horse; therefore, it will be sufficient to state, that my Horse was perfectly

cured in twenty-one days. A more decided proof of skill and judgment is rarely exhibited by any Veterinary Surgeon in the three Kingdoms. I give this testimonial to Mr. Hanlon with many thanks.

JOHN COUGHLAN.

Richmond Park, November, 1863.

Mr. O'Hanlon has attended my Horses in some serious cases of illness, and has been successful in his treatment of them. He has shod regularly for the last three years, six Horses of mine, entirely to my satisfaction. I consider that he is a great acquisition in the town, and a most respectable and well conducted man.

(Signed,) JOHN FURLONG, J.P.

January 10*th*, 1864.

Mr. O'Hanlon (late Farrier Major Royal Horse Artillery) has attended my Horses several times during their illness, and I have great pleasure in stating that he has proved himself on every occasion a man of great ability.

C. LARKING,
13*th Regiment.*

Rathcormack, January 12*th*, 1864.

With great pleasure I can bear testimony to the satisfaction given me by Mr. O'Hanlon, late Farrier Major Royal Horse Artillery, on the several occasions I sought his aid. I consider him a skilful, clever operator, and an intelligent man, and one in whom I have great confidence.

JOHN GEORGE NASON, J.P.

In addition to the foregoing, the Author has in his possession many other testimonials, (the insertion of which would be superfluous) shewing how highly his system is appreciated, and the great success that has at all times attended his Medical treatment of Horses committed to his care, and the skilful and effective operations performed by him on disabled Horses, whereby they were enabled to work, and rendered valuable to their owners, although previously pronounced incurable by other Practitioners of the Veterinary art.

We, the undersigned, certify that Jeremiah O'Hanlon, late Farrier Major Royal Horse Artillery, has, from time to time, been employed by us in the treatment of our Horses, and we have no hesitation in stating that he has invariably evinced great care, skill, and judgment in such treatment, and given us the utmost satisfaction :—

W. Diett, Assistant Adjt.-Gen.
C. R. Egerton, Colonel, late Commanding 18th Depot Battn.
J. Moore, Col. Com. 19th Dep. Batt
C. Chichester, Major, Castle Hyde
G. King, Major, 18th Depot Batt.
L. Bell, Major, 18th Depot Batt.
R. Neville, Major, 11th Regt.
F. Lyster, Major, 11th Regt.
R. A. Daniell, Major, Barrack Master, Dublin
J. Stawell, Major, Barrack Master, Fermoy
J. Reid, Captain, Horse Artillery
E. Harnett, Capt., 11th Hussars
S. Hackett, Captain, 28th Regt.
P. Collis, Capt., Mountford Lodge Fermoy
E. Fairtlough, Capt., 14th Regt.
R. M. Hall, Capt., 13th Regt.
R. Fitzgerald, Capt., 69th Regt.
E. Campbell, Capt. 3rd Regt.
E. Smith, Capt., 95th Regt.
J. Miles, Capt., 3rd Regt.
H Light, Capt., 68th Regt.
W. W. Corban, Capt., 49th Regt.
B. Bennett, Capt., 19th Dep. Batt.
C. Long, Capt., 13th Regt.
H. Thurston, Capt., 13th Regt.
A. Tucker, Capt., 68th Regt.
A. Vesturme, Capt., 11th Regt.
M. S. Morgan, Capt., 14th Regt.
A. P. O. Malley, Capt., 22nd Regt.
H. E. Hall, Capt., 13th Regt.
S. Head, Capt., 13th Regt.
R. S. Morgan, Capt., South Cork Militia
O. F. H. O'Malley, Capt., 7th Lancashire Militia
J. Williams, Capt., 28th Regt.
V. Gilbert, Capt., 13th Lt. Infantry
P. Higgins, Esq., Quarter Master, Fermoy
H. Carberry, Esq., 14th Regt.
J. Cox, Esq., 68th Regt.
C. Lee, Esq., 14th Regt.
C. Larkin, Esq., 13th Regt.
J. Davids, Esq., 14th Regt.
F. E. Webb, Esq., 28th Regt.
W. L. Ogilby, Esq., Licklash Castle
B. Wigmore, Esq., Kilbarry House
J. Hallinan, Esq., Glandillane Mills
J. Morragh, Esq., National Bank, Fermoy
E. K. Carey, J.P., Careysville
E. O'Brien, J.P., Mitchelstown
H. G. Hayes, J.P., Towermore, Fermoy
D. O'Brien, J.P., Cahir, Tipperary
H. Braddell, J.P , Modoligo
C. Deane, J.P., Gurrane
W. C. Collis, J.P., Castlecooke
J. G. Nason, J.P., Rathcormack
A. Devonsher, J.P., Kilshannic
M. Hendley, J.P., Mountrivers
J. Furlong, J.P., Richmond Park
F. Bell, J.P., Fermoy
T. W. White, Medical Doctor
P. Cogan, Staff Surgeon, Fermoy
C. Creed, Medical Doctor, West Cork Artillery
J. Downing, M.D., Fermoy
A. Byrnes, Surgeon, 3rd Regt.
R. White, M.D., Fermoy
J. Turner, Surgeon Horse Artillery
J. Brady, Staff Surgeon, Fermoy
W. Edwards, Staff Surgeon
H. O'Brien, M.D., Kyle Beg

D. Dennehy, Esq., Corrin House
R. Gaggin, Esq., Ballyrichard, Midleton
J. Realie, Esq., Lismount
W. Jermyn, Esq., National Bank
J. Perrott, Esq., Upland
T. Barry, Esq., Firmount
W. Corban, Esq., Bettyville
R. Pearde, Esq., Coole Abbey
P. W. Carey, Esq., Rathbarry
H. T. Norcott, Esq., North View
J. W. Nason, Esq., Conna
T. Rice, Esq., Solicitor, Fermoy
J. S. Green, Esq., Barrister-at-Law, Air hill

Rev. A. Hill, Chaplain to the Forces
Rev. D. Dilworth, P.P., Glanworth
Rev. J. Donaldson, Fermoy
Rev. M. F. O'Mahony, Glanworth
Rev. T. H. C. Finny, Clondulane
Rev. M. Riordan, Rathcormack
Rev. T. Robinson, LL.D., Fermoy College
Rev. T. Walsh, P.P., Conna
Rev. J. O'Flaherty, Chaplain to the Forces
Rev. T. Buckley, Castlelyons

PREFACE.

When the number and variety of works already published by competent writers on Veterinary Surgery, Farriery, &c., are considered, little can be expected from a new compilation besides a careful selection of the most useful matter, and some degree of improvement in the mode of adapting it to the understanding of the general reader, in order to render it of practical utility. With these objects in view, the Author has endeavoured to avoid the use of technical expressions, which only tend to embarrass and confuse those who are ignorant of the Veterinary art; and he has offered to the public no information or remedy, which has not borne the test of actual experiment, or whose efficacy has not been fully established by a long course of practice, extending over a period of twenty-five years, under the most distinguished Veterinary Surgeons of the age. Nothing has been left to conjecture or supposition; no speculative theories have been indulged in, but an amount of solid information has been collected, and presented to the public, in such a form as to combine, as far as possible, two apparently opposite qualities—completeness and conciseness. In treating of Veterinary Science, so intimately connected with anatomy and animal physiology,

the Author admits the difficulty of conveying information in this department of medical knowledge, without using scientific expressions, but as this would defeat one of the principal objects of this work, namely, to popularize the subject, he has studied to make himself intelligible to every capacity, by using language both familiar and easy, and calculated to make his meaning simple and distinct. How far he has succeeded in this respect must be left to the decision of the judicious and candid reader. In a work professing to be partly a compilation, and partly composed of original matter acquired by the Author's personal experience, it is considered scarcely necessary to apologise for the use which has been made of the labors of his predecessors, or for omitting to insert their names. In some cases the latter could not be done with propriety, owing to the uncertainty that exists regarding the origin of some recent investigations in Animal Physiology and Anatomy, leading to important discoveries in Veterinary science; besides in endeavouring to economise space, it was considered necessary to avoid occupying the pages with a too frequent repetition of names and references.

It is hoped that this treatise on the Horse, his diseases, and the remedies for them, manner of exercise, diet, treatment, training, &c., will enable owners of horses, grooms, and others engaged in the training or management of this noble animal, to avoid all application to quackery and superstition. That these means are frequently used to recover horses from certain diseases is a fact; that, notwithstanding the march of intellect, cannot be questioned.

Unfortunately, owing to circumstances to which reference shall presently be made, the use of "charms" to cure the "Farcy," &c., prevails in Ireland to a very great extent. Ignorant impostors succeed in inducing many owners of horses to believe that they have the power, by repeating some mystic jargon, to effect the cure of the most inveterate diseases. That men are found to take advantage of the credulity of others is not surprising, but that rational persons, in the middle of the nineteenth century, should thus allow themselves to become the dupes of such designing knaves, is full matter for wonder and astonishment. In England and Scotland, Royal Veterinary Colleges have been long established, and gentlemen are properly qualified by a regular course of study, and practice for this branch of medical science. Here in Ireland, however, there is a large class of ignorant pretenders, whose knowledge is principally composed of charms and quackery, and who, without having the slightest idea of the physical organization, or the functions of the different parts of the vital system of this noble animal, will presumptuously undertake to cure it of all diseases. When quack medicines fail, charms are resorted to. The latter, though of course monstrously absurd and perfectly inefficacious, do not kill. This cannot be said of the former, for partly owing to the want of a Veterinary College in Ireland, until very recently, and the consequent ignorance that prevailed, this country has been inundated by a quantity of mischievous works on this subject, written by non-professional men, with reckless indifference regarding the nature of their contents, and got

up in England in a cheap form for Irish circulation, anything being deemed good enough for this country.

As an instance of this *animus*, I will quote a circumstance which, although it occurred many years ago, may still be taken as an example of the general contempt and indifference as to its progress, which Ireland has to endure even at the present day. At one time the medicines sold in Dublin were of a very inferior quality, the worst which the London markets could produce. Charles Lucas called public attention to them in a pamphlet entitled "A Scheme to prevent Frauds and Abuses in Pharmacy," and met with violent opposition in his endeavour to remedy these abuses.

The fact of the inferiority of these medicines was notorious, for when some druggists were charged before the British parliament with selling adulterated and unsound drugs to the good subjects of His Majesty in Great Britain, they denied the accusation, and stated that all such drugs were sent to Ireland.

Ireland has enjoyed the blessings of a free education for only thirty years, yet short as that period is, the tone and habits of the people have been much altered for the better; many absurd and ridiculous notions and ideas have disappeared before the light of education, as mists before the rising sun. And those superstitious ideas that still obtain regarding the cure of Farcy, &c., would follow their train, if proper steps were only taken to encourage, foster, and propagate a thorough knowledge of Veterinary Science. A college has been established in Dublin, but the public are scarcely aware of its existence. The press would not have passed over without

due encouragement and encomiums, any steps taken by the authorities in the right direction. The college ought to have the privilege to grant diplomas to properly qualified persons. Public lectures ought to be delivered, and secure a wide circulation, and every exertion used to dispel the alarming ignorance that prevails regarding the proper treatment of one of the most noble and valuable of animals. As an example of the worse than ignorance that exists on this subject, the Author thinks it necessary to describe an occurrence which came under his own observation. A Horse belonging to a farmer not many miles from Fermoy, was taken ill. As a matter of course, the disease wa, only aggravated by the use of improper medicines prescribed by those who knew not the nature of the disorder under which the poor animal laboured. An old woman, reputed to possess some miraculous influence over sick horses, was sent for, and brought a distance of fifteen miles; on her arrival she was immediately brought to the stable, and having examined the horse with the necessary degree of mystery, mingled with some perplexity, and, no doubt, regarding the dupes who surrounded her with scorn and contempt, she proceeded to exercise her supernatural power by blowing three times into the nostrils of the animal, repeating, at the same time, the supposed diabolical expressions which constitute what is called the "charm." But the poor animal "heeded not the voice of the charmer, charmed she ever so wisely," and died the next day.

But the most surprising part of the story is, that the result did not shake the implicit belief in her power,

which the simple owner of the horse retains to the present day. Numerous instances of this description could be given. Another method of operation briefly stated will be sufficient for the Author's purpose. A horse is affected with some malady—the owner sends for one of those quack doctors, on his arrival he orders a fowl to be got, which is bled to death—the vital fluid is preserved, and the animal is compelled to drink of it; the imposter receives his reward, walks off, not forgetting to carry the fowl with him, on which he enjoys a hearty meal at the expense of the simpleton who employed him. While not hesitating to condemn all impositions, quackery, and superstition, the Author, of course, does not mean to imply that all his countrymen are equally susceptible of imposition, equally credulous or superstitious. No, that is very far from his intention. Neither would it be true. That this belief exists pretty extensively is a fact, but it is mostly confined to the least educated part of the community. Men of intelligence occasionally try such remedies, but they are induced to it, sometimes by their workmen, often through curiosity, and generally as a last resource. That superstitious practices of this kind are still in operation, is much to be deplored, as it is a proof of backwardness in this age of progress, but the prevalence of these absurdities the Author believes to be owing to proper means not being used by those whose duty it is to take the initiative in improving and encouraging everything that would tend to the advancement and prosperity of the country, and the spread of enlightened and liberal opinions. The people supply the taxes, and they have

a right to expect that their interests, both moral and material, will be paternally cared for. It has been said of the Irish that their virtues are their own, while many of their faults are to be attributed to the wayward circumstances under which they were placed. These superstitious notions respecting the cure of horses, and the general ignorance that exists on this subject, are owing to the neglect of the government in not taking the necessary steps to promote and disseminate a correct knowledge of Veterinary art by the same system adopted in England and Scotland. The Irish are always ready to avail themselves of every opportunity of improvement placed within their reach. As a proof of this, I may mention that, notwithstanding the education of the vast majority of the Irish people was not sanctioned by law, and received no support from the State until a comparatively recent period, there are more, in proportion to the population, able to read and write in Ireland than in England. And even in the higher walks of literature and art, obliged to contend against the prejudices of country, religion, class, or party, Irishmen have attained an acknowledged eminence of which their country may feel justly proud. Who has not heard of the "glory of Grattan and genius of Moore"—the versatility of Goldsmith, who wrote on many subjects, and adorned all—the heroism and talent of Curran, Emmet, etc.—the genius of Hogan, Maclise, etc., and last, though not least, the grand old tribune, Ireland's immortal Liberator, who wielded at will the fierce democracy, and who left behind him the sacred deposit of his fame, to be treasured for ever in the hearts of Irishmen?

Being desirous to avoid even the appearance of severity or injustice to his countrymen in endeavouring to point out and rectify certain abuses and absurdities, to which he has already referred, the Author has probably extended these prefatory observations to too great a length, and introduced what may be deemed by some, irrelevant matter: he, however, claims the indulgence of his readers while making a few concluding remarks.

Although some important works have, from time to time, been published on Veterinary science, yet, being principally intended for professional men, they are like so many edged tools in the hands of the inexperienced. To make a judicious use of such books it requires a great deal of skill, judgment and ability; so that, notwithstanding the competency of the writer, such works are liable to be abused in the hands of the ignorant and assuming practitioner. Physicians find it often very difficult to determine the disease with which their patient is afflicted, although the sick person explains in what manner he is affected—how much more difficult then, is it to decide in the case of a dumb brute, and what a great amount of experience, skill, intelligence and penetration, are requisite in order to treat a sick animal successfully? The nature of the disease must first be satisfactorily ascertained before such medicines can be used, as chemically combining with the injurious or poisonous matter generated in the system, shall neutralize its effects.

When a Surgical operation becomes necessary, what a perfect knowledge of the anatomy of the Horse is necessary! and what steadiness and skilfulness in the

use of the knife! Yet, how often does it happen that a "sow gelder" without any more knowledge than that acquired by operating on the pig, is allowed to undertake the most delicate and difficult surgical operations, (generally with fatal effect) on the horse, an animal of a totally different organization!*

Although not professing to impart the necessary scientific knowledge, this work, however, being divested of all technicalities in the description of the symptoms of the different diseases, and the mixing and use of the proper medicines, will, it is hoped, in the hands of those not absolutely devoid of a knowledge of the horse, diminish to some extent, the mischievous effects of the present system.

To accomplish this, even in a slight degree, the Author considers an object worthy of his highest ambition; self interest being altogether secondary to the gratification to be derived from opening to the public eye, with a friendly hand, existing abuses, and contributing, by his humble efforts, to remove them.

* The successful results of the Author's medical and surgical treatment, in cases which seemed to be hopeless, and where every remedy was tried unavailingly, before application to him, might be deemed too extraordinary—too much beyond the bounds of possibility in the present state of Veterinary science in Ireland, were it not for the abundant and conclusive testimonials given by gentlemen of the highest position and respectability, to whose numerous testimonials published in this work, the reader is respectfully referred.

AUTHOR'S AUTOBIOGRAPHY.

As a preliminary to the following treatise, I trust I may, without rendering myself liable to the charge of egotism, be permitted to make a short statement in reference to my previous life, adding a few extracts from the annals of the ancient Irish sept with which my name is allied, for the purpose of shewing—as I respectfully hope it will—that I and my humble little work are not wholly unworthy of the confidence of my friends, and of guarding against the attacks of hidden enemies, if any I have.

Evincing an early taste for military pursuits, I, at the age of seventeen years, joined the British army, taking service in that distinguished corps, the Royal Horse Artillery, where I found myself the companion of men almost all of whom were English and Scotch, but instead of entertaining any feeling of inferiority, as I fear too many of my countrymen in this position do, a strong spirit of nationality was roused within me, and I felt proud that I had now an opportunity of proving to my comrades—and accordingly on every occasion I endeavoured to shew—that Irishmen were not what they had been unjustly represented to be.

Having completed my regular course of drill, the Riding-Master reported to the Commanding Officer, Colonel Rowland, that I was the best rider and swordsman under his command, and shortly afterwards Colonel

Rowland (now a distinguished General) recommended me to learn farriery, with which recommendation I of course instantly complied. Accordingly I was placed under the instructions of the Veterinary Surgeon, who was directed to initiate me fully into the various branches of the art, which I subsequently studied under him for a period of six years. In the meantime the Sergeant-Major of the regiment, fearing, from the progress which I was making, that at some future day I might become Farrier-Major, to which rank he was of opinion no Irishman should be promoted, endeavoured by every means in his power to injure my character, and depreciate my capabilities, and brought several groundless charges against me, all of which were dismissed; but, notwithstanding his enmity, on completing the sixth year, I was promoted to the rank of full farrier. In this position I continued for two years, discharging my duties to the satisfaction of the Veterinary Surgeon, but still followed by the persecution of the Sergeant-Major, who, on every opportunity, spoke disparagingly of me to the officers, with whom he had more than ordinary influence. About this time a change took place in the regiment, which rendered my prospects, as I, at the time, thought rather unfavourable—Colonel Rowland and the Veterinary Surgeon both left the regiment. The latter was, however, succeeded by a gentleman whom I found to be entirely free from those national prejudices which too often retard the promotion of Irishmen in the British service, and whose impartial qualities soon merited my confidence, as the result shews. The Farrier-Major having been reduced, the other farriers were ordered to prepare for examination, in order that the one most competent to take his place might be chosen, and after a full examination, I was preferred and promoted to the vacant rank, which I held until I left the army. I believe I may safely say, that I am the first Irishman who ever held the position of Farrier-Major in the Royal Horse Artillery.

I now trust that those friends of mine who might incline to think me hostile to my former—that is, *national*—ideas, because of my long service in the British army, will not henceforth consider me an unworthy descendant of my forefathers. The sept of O'Hanlon was amongst the foremost of those who resisted the invaders in the year 1414, when Sir John Talbot was made Lord Lieutenant of Ireland for the purpose of crushing the Irish chieftains. Sir John having assembled his army, marched first against the O'Hanlon, who were supposed to be his strongest and most inveterate enemy in Ulster; but, after great slaughter, butchery, plunder, and burning, he was obliged to retire from the bloody field of battle owing to the superior bravery and tactics of the O'Hanlon chieftains. In 1474, Sir Edward Poynings was sent over to put down, and, if possible, destroy the Irish people, and we then find that the O'Hanlons and O'Neills were the leading clans who opposed him. And in 1515, when the English government called on the Secretary for Ireland to return the names of the leading Irish rebel chieftains, that of O'Hanlon was the first on the list. Sir Henry Sydney, in a Report made by him in 1575 to the English government, with reference to the state of Ireland at that period, says, that he found the O'Hanlons and their county—Ulster—most obstinate, shewing an unusual spirit of nationality. And in a Report of the Deputy in 1601, on the disaffected state of Ireland, it is mentioned that Munster was well reduced, and "began to taste the sweetness of peace;" that the like might be said of Leinster, except as to the territories of the O'Moores and O'Connors, but that in the northern part of Ulster, the country of the O'Hanlons, they (the O'Hanlons) were collecting in great force, and learning the tactics of war. Again, in 1641, at the time of the great insurrection and massacre of the Irish in Ulster, when Lord Caulfield resided in the castle of Claremount as Governor of the fort, the O'Hanlons divided their forces, and one

portion having marched on Tanderagee, took it by storm, while the other marched on Armagh and Newry, and did the same with both these places. At the memorable battle of Benburb, on the 5th of June, 1646, Owen Roe O'Neill gave charge of the Irish banners to the O'Hanlons, whom he called the regal standard bearers of Ireland, and with 5,000 foot, and 500 horse, he completely routed General Monroe's army of 6,000 foot, and 800 horse. This is recorded as the hardest and bloodiest battle ever contested in Ireland. In 1650, Sir George Monroe, who was then in Ulster fighting against the Bishop of Down, Lord Enniskillen, and the O'Hanlons, reported very unfavorably to Cromwell of the state of that country, and Cromwell replied that all those found in arms against his authority should, without exception, be put to the sword. In a battle fought shortly afterwards, the Bishop of Down and Lord Enniskillen were slain, whereupon the O'Hanlons were obliged to fly to the woods and mountains for shelter. An order was then issued by the tyrant Cromwell, that two brothers of the O'Hanlons—who were always first in battle—should be taken dead or alive, and they hearing of it, decided on going to Munster, which they did, and arrived at a place called Farrahy, near Kildorrery, in the county of Cork, where one of them remained. The other brother (from whom I claim descent,) proceeded on to Mallow, and thence to Grenagh, where he resided for some time, but finally settled in the parish of Donoughmore, county Cork.

CONTENTS.

PART FIRST.

Section I.

Section II.

Section III.

Section IV.

PART SECOND.

DISEASES OF THE HORSE.

Class VII.

Class VIII.

Class IX.

Class X.

PART FIRST.

THE HORSE AND ITS DISEASES.

PART FIRST.

SECTION I.

INTRODUCTION — EARLY RECORDS OF THE HORSE — THE WILD HORSE — THE DOMESTICATION OF THE HORSE — HORSES OF DIFFERENT COUNTRIES—THE TEETH CHARACTERISING THE AGE.

Introduction.

If the animals domesticated by man are essentially necessary to his comforts and convenience, no apology need be offered for attempting to reduce into a system the arts of preserving them in health, and of removing their diseases, both of which must be founded on a knowledge of the structure and functions of the animals in question, and it is these therefore that form the groundwork of what is called the art of Farriery. The principal hindrance to its advancement has been its total confinement in the hands of persons proverbially ignorant. Custom reconciles the grossest absurdities, and hence, though the value of the animal in question is a theme that has exercised in every age the pens of thousands, yet, the knowledge of the means of preserving them in health, and of curing their diseases, has been regarded as a subject beneath the dignity of a gentleman. But at length superior to vulgar prejudices, and aware of its great utility and importance, mankind are content to consider this among the liberal arts, and to regard the

profession and practice of it as no longer incompatible with the pretensions of a scholar, or the rank of a gentleman. The generality of Farriers unfortunately are not willing to be put to the trouble of learning, nor to the mortification of owning that they need it; hence they obstinately maintain that nothing is necessary, but what is known, and that there is a mechanical art learned by initiation, in common with every other handicraft pursuit. But Farriers should be aware that there is no mortification in candidly pleading ignorance; on the contrary, ingeniousness would enoble them. In the first place, it should be understood that there is no honorary distinction between the Veterinarian and Farrier. The terms should be well explained. Farriery is a branch of Veterinary medicine only; Veterinarian is not an assumed term, simply it is a definite appellation to which the Farrier has an equal right, if he professes and understands the diseases of animals in general; that though the Veterinary College holds out the means of attaining this art by scientific progression, yet, the same means that they pursue are within the reach of other persons; they possess no secret arts—the book of nature is equally open to the meanest Farrier if he pursues investigation upon equally excellent principles.

Outlines of the Art of Farriery.

Man, ever ready to improve surrounding objects to his advantage, would not be long without subjecting to his use such animals as his reason led him to suppose would prove most useful, or his experience had proved were the most tractable. And it is possible that the practice of that branch of it called Farriery was of later date, inasmuch as the subjugation of the horse himself was subsequent to that of other domestic animals. At what exact period this took place is not necessary to inquire, yet, that it was very early cultivated, we have sufficient testimonies; indeed reason would convince us that as man beheld his own disease removed or lessened

by the application of means, he would be led to make similar attempts upon the complaints of the horse. The term Farrier was derived from the French verb *ferrer*, to shoe a horse, which seems to be derived from the word *ferrum*, iron in Latin. And as those persons who shod horses in former days were the only Horse Doctors, the term Farrier came to signify the art of curing the diseases of horses. Homer, who flourished 900 years before Christ, celebrates the management of the Greeks with regard to their horses.

Xenophon, a Greek philosopher, poet, and warrior, wrote a treatise on equitation, De re Equestri, nearly 500 years before the birth of Christ, in which he quotes several authors who had written on the same subject before, hence, we may naturally conclude the treatment of the diseases of the horse had been attended to before this. We have not heard of any other writer on Farriey until after the Christian era, from the beginning of which we have several fragments. Valerius Maximus mentions one Herophilus, a farrier, who had written *Equerius Medicus*, but his work has not been preserved. It was only fifty years after the birth of Christ when Columella wrote his celebrated treatise, in which he mentions an eminent cotemporary author, Palagonius, of whose work I believe we have no remains.

It was about 300 years after the birth of Christ when the true father of this art appeared, the Veterinary Hippocrates, who wrote his *Vegetius De Arte Veterinaria*, which was the oracle of many succeeding ages, and upon which many of the future improvements were built. Vegetius likewise gives an account of all the most celebrated authors before him, among whom the most worthy of notice are Columella, Apsyrtus, Chiron, and Pelagonius. The art appears to have gained little in addition for several centuries subsequent to this, though some writings on the subject appeared, of which we have only extracts handed down to us, and for which we are indebted to Constantine. Porhyrogenet, who

commanded that all the works on this important subject that had appeared, should be collated, and the substance of them formed into one body for the future guidance of practitioners, and the preservation of the ancient opinions. From this period we may date the improvement of Farriery, and during this century many treatises upon the subject appeared in different parts of Europe. Among those to whom the science was indebted, may be reckoned the celebrated historian, Gessner, who compiled from Aristotle, Pliny, Allian, Oppian, Varnon and many others. During the seventeenth century, the art advanced and numerous were the publications on the subject that appeared in every country. In 1654, the Grand Mareschal, Francois, appeared; a very large and meritorious work, said to be composed by several hands. In 1675, Gerard Blazius, a Dutchman, published in Amsterdam, a treatise on the anatomy of the horse.

The eighteenth century will ever make a distinguished figure in the annals of history, for the great advance that took place in the art. The names of the most celebrated were Garsault, who translated Snape into French in 1734. In the same year, T. and G. Saunier, two Dutchmen, published their celebrated work. In 1749, Linnæus published his Pan Succus, which is rather an account of the habits and manners of domestic animals, than any treatise on their disease. It was about the middle of this century also that several of the continental countries, opening their eyes more fully on the importance of this branch of science, established seminaries for the purpose of teaching it scientifically. Monsieur Bourgelet, was a volumnious author. In 1750, he published his elements of Farriery in 3 volumes; in 1765, his *Materia Medica*, for the use of the Veterinary pupils. As a cotemporary with Bourgelet, the elder La Fosse (a name that will ever be respected in the annals of Veterinary medicine) made numerous improvements and discoveries, which he usually communicated in the form of memoirs to the world. In 1766, La

Fosse, junior, who occupied the same situation his father had held (that of Farrier to the lesser stables of the King) presented his guide du Marechal, a work well known in Europe. After the death of Bourgelet and La Fosse, we hear of no character of any eminence for some years. Blunderille appears to have been one of the first Veterinary writers in England—he lived in the reign of Elizabeth. His work appears chiefly a compilation from ancient authors, of which he translated several into English. His ideas were fettered with his attachment to the *manege*, and consequently introduced the errors and absurdities with which that system was then prevalent.

Nearly about this time, also, lived the celebrated Gervasi Markham, whose treatise on Farriery, though strictly eccentric, and grossly absurd, went through numerous editions, and became the guide and way-post of almost every practitioner. Sollysel's celebrated work was translated from the French, which had, in some measure, an influence in refuting the general errors at that time prevalent, for at this time it was very customary in some diseases to tie or bar the veins; the foundered legs were tied, that the inflammation might not proceed upwards. A cough raised the supposition that the horse had swallowed feathers. A stumbling horse had his nose split. It is therefore evident that Sir William Hope's translation of Sollysel must have contributed greatly among the intelligent to place these errors in a proper point of view. Mr. Gibson was also a very good Farrier. Doctor Bracken, who was a physician of great abilities and extensive knowledge in his profession, a man of considerable erudition, a sportsman, and a wit of peculiar cast, his works have been as much admired and read for the peculiar style in which they are written. Bartlet was likewise a physician, who formed himself on the model of Gibson and Bracken, collecting all their excellencies, and giving the sum of their treatment in a much more compendious form, and wholly practical.

To him succeeded Osmer, who was likewise bred a surgeon, but practiced the Veterinary art in Oxford street, London. Mr. Clarke, of Edinburgh, the King's Farrier for Scotland, soon after this gave the world his excellent treatise on shoeing and diseases of the feet. Nearly the same time, the public were indebted to Lord Pembroke for his work, which, though professedly written on the management of Dragoon horses, contains some excellent observations on shoeing, and the general treatment of the animal.

In 1790, Prosser, a gentleman engaged in the practice of physic, advertised his intention of practising Farriery, and as a previous step to it, published a treatise on the strangles and fevers of horses.

In 1796, appeared a very elegant work, in quarto, the production of S. Freeman, Esquire, a gentleman of fortune, learning, and great ingenuity. A Mr. John Laurence about this time published a small volumn containing extracts from M. St. Bel, Osmer, Clark, and Lord Pembroke.

In 1800, Mr. Morecroft published a small pamphlet, entitled, "A cursory account of the various methods of shoeing horses," with incidental observations.

In 1801, Mr. White published a very good work on Farriery, called "A compendium of the Veterinary art." The year 1801, likewise, produced a work of considerable elegance from the pen of Mr. Richard Laurence, of Birmingham, Veterinary Surgeon.

In 1803, appeared in a large volume, quarto, Mr. John Feron, Veterinary Surgeon to the 15th Dragoons.

1805, if size constituted merit, this year would have been a memorable one for bringing forth a volumnious production in the form of a Veterinary Directory, from the pen of Mr. Thomas Boardman, Veterinary Surgeon to the 3rd Regiment of Dragoons.

In 1806, Mr. Francis Clater, a chemist and druggist, published an octavo volume, entitled, "Every man his own Farrier." It consisted of old Jargon, a little leavened with the new.

In 1809, Mr. Bracy Clark, of London, favored the public with the first part of his dissertations on the foot of the horse. About this time Mr. Delabere, Veterinary Surgeon, and professor of animal medicine in general, wrote a splendid work called the "Outlines of the Veterinary Art, or the Principles of Medicine, as applied to the structure, functions, and economy of the horse." I have gained more information from this great work than from the others that I have studied.

Earliest Records of the Horse.

The native country of the horse cannot with certainty be traced; it has been found varying in size, form, and utility, in most of the sultry, and in many of the northern regions of the old world. We are told—so early as 1650, before the birth of Christ—the horse had been domesticated by the Egyptians. "When Joseph carried his father's remains from Egypt to Canaan, there went up with him both chariots and horsemen"—Genesis i. 9.

One hundred and fifty years afterwards the horse constituted the principal strength of the Egyptian army. "Pharoh pursued the Israelites, with six hundred chosen chariots"—Exodus xvi. 7.

It was 1920 years before the birth of Christ, when Abraham, having left Aaron in obedience to the Divine command, was drawn into Egypt by the famine which raged in Canaan—Genesis xii. 16. Pharoh offered sheep and oxen, asses and camels; horses would doubtless have been added, had they then existed, or had they been subdued in Egypt. The Greeks affirm that Neptune struck the earth with his trident, and the horse came forth. Six hundred years after the time just alluded to, Arabia had no horses. "Solomon imported spices, gold and silver, from Arabia" (2 Chron. ix. 14), but he supplied the horses for his own cavalry and chariots from Egypt.

In the seventeenth century after Christ, when Mahomet attacked Koreish, near Mecca, he had but two horses in his whole army. The horses of Arabia,

and of the south-eastern part of Europe, were clearly derived from Egypt, but whether they were imported from the south-western part of the world, or, as is more probable, brought from the interior, or northern coast of Africa, cannot with certainty be determined.

The Wild Horse.

Troups of wild horses are found on the plains of Great Tartary, and also in several parts of South America. All travellers who have crossed the plains, extending from the shores of La Plata to Patagonia, have spoken of numerous droves of wild horses, which roam at large over these extensive plains. Some affirm that they have seen ten thousand in one troop; they appear to be under the influence of a leader, the strongest and boldest of the herd, whom they implicitly obey. A secret instinct teaches them that their safety consists in their union. The lion, the tiger, and the leopard are their principal enemies. At the sound of some signal, intelligible only to themselves, they either close in a dense mass around their enemy, and trample him to death, or placing the mares and foals in the centre, form themselves into a circle, and welcome their enemy with their heels. Their leader is the first to attack the common foe, and when prudence dictates a retreat, they follow him in his rapid flight.

In no part of America, nor of the more newly discovered islands of the Pacific, was the horse known until it was introduced by Europeans; and the origin of the horses of Tartary is traced to those who were employed in the siege of Azophe in 1657, but which were turned at large for want of forage. Troops of wild horses are occasionally met with in Central Africa, the island of St. Domingo, and in the deserts of Arabia.

The wild horses of Tartary, although easily domesticated, differ in character from those on the plains of South America; they will not suffer a stranger to join them. If a domesticated horse comes in their way,

unprotected by its master, they will instantly attack him with their heels and teeth, and thereby speedily destroy it. Among the Tartars, the flesh of the horse is a frequent article of food, and although they do not, like the Indians of the pampas, eat it raw, yet their mode of cooking would be very uninviting to the European epicures; they cut the muscular part into slices, and place them under their saddles, and after having galloped thirty or forty miles, the meat becomes tender and fit for use; even at all their feasts, the first and last, and most favored dish, is a horse's head. When water was not at hand, the Scythians used to draw blood from their horses and drink it. The Dukes of Muscovy, for nearly two hundred years, presented the Ambassadors from Tartary who attended their courts, with mares' milk.

The Domestication of the Horse.

The domestication of the horse may be regarded as one of the most important acquisitions made by man from the animal kingdom; without this most useful quadrupid, civilization must have made comparatively little progress. The horse contributes largely to our luxuries, pleasures, and services—he facilitates and lessens the labours of the field—he transports burdens, and man himself, to the most distant parts with certainty, celerity, and ease—he is ever the most faithful and obedient servant of his master—his form, temper, and sagacity have been most admirably and wisely adapted to our use; whether we contemplate the powerful and symmetrical structure of his frame, the elegance of his limbs, evincing strength and speed in their movements—his large and sparkling eyes, which either beam with mild intelligence, or flash with energetic fire, or the docility and tractability of his disposition, we cannot fail to regard him as one of the noblest of animated beings. In addition to these qualities he possesses the most intrepid courage; he has been the bearer of man in the bloody field of battle, where he fearlessly meets every danger; the most appalling dis-

charges of musketry, and the thunders of cannonading, he faces with fortitude, as dauntless as a lion, and seems to enter into the spirit of the attack. This has been his character from the earliest ages, and his sagacity is no less remarkable.

When an Arabian falls from his horse, and is unable to rise, he will immediately stand still and neigh until assistance arrives; if he lies down to sleep, as fatigue sometimes compels him in the midst of the desert, his horse will stand still, and watch over his safety, and neigh to arouse him when danger seems approaching.

The whole stock of an Arab of the desert consisted of a mare; the French consul offered to purchase her, in order to send to his Sovereign Louis XIV. The Arab would have rejected the proposal at once with scorn and indignation, but he was miserably poor, he had no means of supplying his most urgent wants, or of procuring the barest necessaries of life, still he hesitated; he had scarcely a rag to his back, his wife and children were starving; the sum offered was great, it would render himself and family the greatest luxuries. At length he reluctantly consented, and brought the mare to the dwelling of the consul; he dismounted, and stood leaning on the mare, gazed at the proffered gold, then at his favorite, and sighed, and wept, and finally exclaimed—"To whom am I about to yield thee up—to Europeans, who will tie thee close, who will beat thee, and render thee miserable—return with me my jewel! my beauty, and rejoice the hearts of my children," and so saying, he vaulted upon her back, and was out of sight in a moment.

An English envoy was returning from his mission, and encamped near Bagdad. An Arab rode a bright bay mare of extraordinary beauty before his tent, until he attracted his attention. On being asked if he would sell her—"what will you give?" was the reply; "that depends upon her age." "I suppose she is past five;" "guess again," said the Arab; "look at her mouth," said he with a smile. On examination, she was found to be

rising three; this, from her size and symmetry, greatly enhanced her value. The envoy said, "I will give thee fifty tomas" (a coin nearly of the value of a pound), "a little more" said the Aarab, "if you please;" "eighty"—"a hundred." The Arab shook his head and smiled. The offer at length increased to two hundred tomas; "well," said the Arab, "you need not tempt me any further," "it is of no use." "You are a rich elche" (nobleman) "you have fine horses, camels, and mules, and loads of silver and gold." "Now," added he, "you want my mare, but you shall not have her for all you are worth."

An Arab and his tribe had attacked in the desert, the Damascus caravan; the victory was complete, and the Arabs were already busy in packing up their rich booty, when the cavalry of the Pacha of Acre, who had started to meet this caravan, suddenly poured down upon the victorious Arabs, killed a great number, and captured some prisoners, and having bound them with ropes, they led them to Acre, in order to present them to the Pacha. Abow-el-Marsch, the leader of the party of plundering Arabs, had received a ball in his arm during the skermish; the wound not being mortal, the Turks tied him on a camel, and took possession of his charger, and led away both the horse and his rider. The night previous to the day they were to enter Acre, they encamped with their prisoners in the mountains of Saphadt. The wounded Arab had his legs tied together with a thong of leather, and was streatched near the tent where the Turks were sleeping. During the night the pain of his wound kept him awake, and he heard his own horse neigh amongst those of the Turks, which, according to oriental custom, were shackled together around the tent. He recognized his horse's voice, and could not resist the desire he felt to speak once more to the companion of his life. He dragged himself painfully along the ground, by the aid of his hands and knees, and at length managed to reach his courser, saying, "my poor friend, what will you do among the Turks? thou wilt be imprisoned

beneath the vaults of a Khan, along with the horses of an Aga or Pacha. The women and the children will no longer bring thee camels' milk and barley, and doura, in the hollow of their hand. Thou wilt no longer range freely through the desert, like the Egyptian wind, neither will thy breast ever more cleave the waters of the Jordan. If I am to live in slavery, do thou at least be free. There, go, return to the well-known tent, to lick the hands of my little children." While speaking thus, Abou-el-Marsch had gnawed with his teeth the goats' hair rope with which the horse was shackled, and the animal was free; but on beholding his master bound and wounded at his feet, the faithful and intelligent courser instinctively understood what no language would have been able to explain to him, he lowered his head, snorted over his master, and then seizing him in his teeth, with the leathern girdle which encircled his waist, instantly started off at full gallop, and carried him as far as his own tent, when the faithful animal immediately fell dead with exhaustion.

Horses of different Countries.

The Egyptian horses are preferable to the Barbary ones in size, beauty, and goodness; the modern horse of this country has little to recommend him. The disposition under which the inhabitants groaned, altogether discouraged the rearing of a valuable breed for their profession, and were completely at the mercy of their Turkish oppressors, and the choicest of their animals were often taken from them without the slightest remuneration for the wrong. It was therefore a common practice with the owners of superior or good horses to blemish or to lame them, in order that they might not be robbed of them by order of the Bay. The testimony of Burckhards is to this effect:—"The Egyptian horse is ugly, of coarse shape, and looking more like a cart horse than a racer; thin legs and knees, and short and thick necks, are frequent defects among them. The head is sometimes

fine, but I never saw good legs in an Egyptian horse. They are not able to bear great fatigue, but when well fed their action occasionally is more brilliant than that of the Arabian. Their impetuosity, however, renders them peculiarly valuable for heavy cavalry, and it is upon this quality alone that their celebrity has ever been founded."

The Dongola, or Arabian Horse.

It is very doubtful what figure these horses would make in point of swiftness, their form being so entirely different from that of the Arabian; but if beautiful and symmetrical parts, great size and strength, the most agile, nervous, and elastic movements, great endurance of fatigue, docility of temper, and, beyond any other domestic animal, seeming attachment to man, can promise anything for a stallion, the Nubian is above all comparison, the most eligable in the world. Few of them are less than sixteen hands high. The Dongola horses are the most perfect in the world, being beautiful and symmetrical in their parts, nervous and elastic in their movements, and docile and affectionate in their manners. The Dongola horses are usually of a black color, but their are some bright bays and sorrels. The slender but finely set neck, the noble crest, the elevated withers, the beautiful action and bearing of the animal, are admirable; but the long and slender legs, the weakness of the fore-arm, the narrowness and want of depth of the chest, and even deficiency of substance about the flank and quarters, could not escape observation; such an animal might have speed, but his endurance must be doubtful, and it is difficult to suppose that any breed of English horses could be materially improved by it.

The Horse of Æthiopia and Abyssinia.

The number of horses in Æthiopia must have considerably decreased, for Cyrtacus, a former King of that country, entered Egypt at the head of 100,000 cavalry.

The horses of this country are strong, nimble, mettlesome, and mostly black; they are used only for war, and in the chase; they travel no long or fatiguing journeys, and all the drudgery of every kind is performed by the mule.

The Toorkoman Horse.

Turkistan is that part of South Tartary, north-east of the Caspian sea, and has been celebrated from very early times for producing a pure and valuable breed of horses—they are called Toorkomans—they are said to be preferable to the pure Persians for actual service—they are large, from 15 to 16 hands high, swift and inexhaustible under fatigue; I knew some of them to travel nine hundred miles in eleven successive days; they are, however, too small in the barrel, too long in the legs, occasionally ewe-necked, and always having a head out of proportion large, yet they are so good that one of the pure blood is worth two or three hundred pounds in that country.

Spanish Horse.

The Spanish horses, for many centuries, ranked next to those of Barbary and Arabia; they descended from the Barbs, or rather they were the Barbs transplanted to a European soil, and somewhat altered, but not materially injured by the change. The common breed of Spanish horses have nothing particular about them. The legs and feet are good, but the head is rather large, the forehand heavy, and yet the posterior part of the chest deficient, the crupper also having too much the appearance of the mule. Berenger thus ennumerates their excellencies and their defects—"the neck is long and arched, perhaps somewhat thick, but clothed with a full and flowing mane—the head may be a little too coarse—the ears long, but well placed—the eyes large and full of fire—their carriage lofty, proud and noble—the breast large—the shoulders sometimes thick—the belly frequently too full and swelling, and the loins a little

too low, but the ribs round, and the croup round and full, and the legs well formed and clear of hair, and the sinews at a distance from the bone, active and ready in their places, of a quick apprehension, a memory singularly faithful, obedient to the utmost proof, docile and affectionate to man, yet full of spirit and courage."

The Portuguese Horse.

There was a time when the Lusitanian of Portuguese horses were highly celebrated. The Roman historian, Justin, compares their swiftness to that of the winds, and adds, that many of them might be said to be born of the winds, while Berenger, who lived at the time when the glory of the Spanish horse had not quite faded away, says, that the Portugal horses are in no repute, and differ as much from their neighbours, the Spaniards, as crabs from apples.

The French Horse.

According to the survey of 1829, France contained 2,400,000 horses, including those of every description; the number of mares was 1,227,781; the greater part of these were employed in the breeding of mules, and perhaps not more than the fourth part were used for keeping up the number of horses. Besides these, nearly 27,000 horses are annually imported into France, either on speculation of immediate sale, or for the express purpose of improving the breed. Two-thirds of the French breed are devoted to the purpose of light work, and possesses a certain degree, and that gradually increasing, of Eastern blood. It must be supposed that so extensive a country as France, possesses various breeds of horses. Auvergne and Poiton produce good ponies and galloways, but the best French horses are bred in Limousin and Normandy. From the former district come excellent saddle horses and hunters, and from the latter, a stronger species for the road, the cavalry service, and the carriage. France, in the year 1837, hand 215

stallions of pure English and Irish blood, imported into France; 266 Arabs, Barbs, Persians, or Turkish horses; 274 English and Irish mares, of true blood, and 41 Eastern mares. Their progeny is also traced so far as it was practicable.

The Sardinian and Corsican Horses.

They are small, well made, and capable of enduring much fatigue. The horses that come from Sardinia and Corsica have short bodies, are bold and courageous, and unquiet in their pace; they are so nervous that they will stand still in no ground, and therefore, this kind of horse requires a discreet and patient rider.

The Austrian Horse.

The following account is given by the Duke of Ragusa, of the Imperial establishment, for the breeding of horses at Mesohagyes, near Carlesburg, in Austria:—"This is the finest establishment in the Austrian monarchy for the breeding and improvement of horses. It stands on 40,000 acres of land, of the best quality, and is surrounded in its whole extent, which is fifteen leagues, by a broad and deep ditch, and by a broad plantation 60 feet wide. It was formerly designed to supply horses to recruit the cavalry; at present its object is to obtain stallions of a good breed, which are sent to certain depôts for the supply of the various provinces. The whole number of horses at present here, including the stallions, brood mares, colts and fillies, is 3,000."

The German Horse.

The German horses are large, heavy, and slow. The Hungarians may be an exception, being lighter, speedier, and giving greater proof of Eastern blood. They are generally of a dark bay color.

The Italian Horse.

The Italian horses were once in high repute, but they have sadly degenerated; one circumstance has mainly

contributed to this falling off in reputation and value, videlicet—that the breed has been kept up by occasional intermixture, not of Eastern, but of European blood.

The Flemish and Dutch Horses.

The Flemish and Dutch horses are large, strong and heavy. The English are very found of having recourse to them for keeping up the breed of large cart horses.

The Finland Horse.

Finland horses are small, not more than twelve hands high, beautifully formed, and very fleet. The peasants take them from the forests when they are wanted for travellers; although apparently wild, they are under perfect control, and they trot along with ease, at the rate of twelve miles an hour.

The Iceland Horse.

There are numerous troops of horses in this cold country, descended, according to some writers, from the Norwegian horse, but, according to others, as being of Scotch origin. They are very small, strong and swift. There are thousands of them in the mountains, which never enter a stable; but instinct or habit has taught them to scrape away the snow, or break away the ice in search of their food.

The American Horse.

There are several breeds of horses in America. The horses of Canada and the Northern States are supposed to be of French descent, and many of the celebrated American trotters are of this breed. The Correstga horse is found in Pennsylvania, and the middle states. They are long-legged and light in the carcass, sometimes rising 17 hands high, used principally for the carriage, but when not too high, and with sufficient substance, useful for hunting and the saddle. The Irish and English horse, with a good deal of blood, prevails in

Virginia and Kentucky, and is found to a greater or less degree in all the states. The Americans have, at different times, imported some of our best horses. The celebrated "Shark," the best horse of his day, was the sire of the best Virginia horses, and "Tallyho," a son of "High Flyer," peopled the Terseys. In the back settlements, and in the south-western states, is a horse resembling the wild horse of the Pampas.

The Turkish Horse.

The Turkish horses are descended from the Arab, crossed by the Persian and other bloods. There is no horse more gentle, nor more respectful to his master, or the groom that dresses him; the reason is, because they treat their horses with great kindness. They are longer in the body than the Persian, and the crupper more elevated—their general height is from 14 to 15 hands high.

The Persian Horse.

I have ridden a Persian horse for thousands of miles, oftentimes twenty-four hours in the saddle, without coming off, and I candidly say, that I see no difference between them and the Irish horses, only they run a little smaller than the Irish. I have also ridden Arabian horses, for hundreds of miles, but I prefer the Persian, as the Arabians are very apt to stumble. The native Persian horse was so highly prized, that Alexander considered one of them the noblest gift he could bestow; and when the Kings of Parthia would propitiate their divinities by the most costly sacrifice, a Persian horse was offered on the altar.

The Arabian Horse.

The Arabian horses deservedly occupy a very high rank. A few wild horses are yet seen on some of the deserts of Arabia; they are hunted by the Bedouins for their flesh, which is considered a delicacy of the animal

in young, and also to increase their stock of inferior horses, which they often palm on the merchant as descended from the sacred breed. There are three breeds or varieties of Arabian horses—the Attechi, or inferior; the Kadischi, literally horses of an unknown race, answering to our half-bred horses, a mixed breed, and the Kochlain horses, whose genealogy, according to the Arab account, is known for two thousand years. Many of them have written and attested pedigrees, extending more than four thousand years. The Arabian horse would not be acknowledged by every judge to possess a perfect form; his head, however, is inimitable. The broadness and squareness of the forehead, the shortness and fineness of the muzzle, the prominence and brilliancy of the eye, the smallness of the ears, and the beautiful course of the veins, will always characterize the head of the Arabian horse.

The Russian Horse.

It may well be supposed that this animal will be a very different character in various parts of this immense empire. The heavy cavalry, and the greater part of the horses for pleasure, are descended originally from Cossack blood, but improved by stallions from Poland, Prussia, Holstein, and England. It has been supposed that no horse, except the Arab, or the Irish horse, could endure privation like the Cossack, or had combined speed and endurance equal to him. In Southern and Western Russia, and also in Poland, the breeding of horses occupies the attention of great landed proprietors. The stud of the Russian Countess Orloff Shoesmensky, in the province of Walonese, contains 1,320 horses—Arabs, Irish, English, and native horses; the ground attached to it amounts to 1,100 acres.

The Norwegian Horse.

This horse is larger than the Swedish or Finland, but is equally hardy and attached to his owner. The roads

in Norway are the reverse of what they are in Sweden; they are rough and almost impassable for carriages, but the sure-footed Norwegian seldom stumbes upon them.

Of the horses of the island of Fervestill, belonging to the Danish crown, Berenger speaks in terms of much praise. He says that they are small of growth, but strong, swift, and sure-footed, going over the roughest places with such certainty, that a man may more surely rely upon them than trust to his own foot.

The Prussian Horse.

Prussia has not been backward in the improvement of her horses. The government has established some extensive and well-regulated studs in various parts of the kingdom; and many of the Prussian noblemen have establishments of their own. In some of the marshy districts, and about the mouth of the Vistula, there is a breed of large and strong horses, suited to Agricultural purposes.

The Lapland Horse.

This animal is small but active, and willing, somewhat eager and impatient, but free from vice. He is used only in the winter season, when he is employed in drawing sledges over the snow, and transporting wood, forage, and other necessaries, which in the summer are all conveyed in boats. During the summer these horses are turned into the forest, where they form themselves into distinct troops, and select certain districts from which they rarely wander.

Swedish Horse.

This horse is small, but nimble and willing; he is almost entirely fed on bread, composed of equal parts of rye and oatmeal; to this is added some salt, and if he is about to start on a long journey, a little brandy. The affection of the Swedes for their horses is so great, that they often shed tears when they have driven them beyond their strength.

The Tartarian Horse.

Tartary comprehends a vast extent of country, reaching from the Eastern Ocean to the European dominions of Russia, through the central parts of Asia and Europe. Eastern Tartary belongs chiefly to China, and the tribes which inhabit this immense space are dissimilar in their appearance, manners, and customs, but with a few exceptions, the character of the horse is nearly the same.

The wild horse is found in various parts of Tartary, but nowhere can it be considered as the remnant of an original race that has never been domesticated. The horses of the Ukraine, and those of South America, are equally the descendants of those that had escaped from the slavery of man in 1657, when employed at the seige of Azof.

The East India Horse.

We will now travel eastward, and examine the breeds of horses in India. They are small, and although some have considerable endurance and courage, they ware the general character of degeneracy from a noble stock. First in value is the Toorky, originally from Toorkastan, and a Persian, beautiful in his form, graceful in his action, and docile in his temper; when skilfully managed, his carriage is stately and grand; his spirit rising as his exertions are required, he exhibits to his beholders an appearance of fury in the performance of his task, yet preserving to his rider the utmost playfulness and gentleness; they are from 14 to 15 hands high, and have the common defect of the East India horse, smallness and length of bone below the knees and about the hocks. Next comes the Iranee horse, well-limbed, and his joints closely knitted, and particularly powerful in the quarters, but large head, and hanging ears, and deficiency of spirit.

The gentle and docile Cozakee, is deep in the girth, powerful in the fore-arm, but with large head, and cat-hammed, hardy, and calculated for long journeys. There are studs in different parts of India, in which

some valuable stallions are kept, for the purpose of improving the various Indian breeds.

The Australian Horse.

The eastern coast of Australian horses were derived from Cape of Good Hope, and from India; very little judgment was employed in the selection, and very few horses of good quality could have been procured from either place. They have an incurable habit of shying, and they are not very sure-footed.

The Cape of Good Hope Horse.

Nothing is certainly known of the western coast of Africa, descending towards the south; but arriving at the Cape of Good Hope, we find that a horse, if a native of that country, is only occasionally seen in its wild state. The horses that were introduced by the first colonists, the Dutch, were mostly procured from Batavia, Java, and South America. At the very commencement of the colony, many horses were imported from Persia; these were mingled together, and crossed in every possible way, except that not one notion of scientific improvement seems to have entered the head of the Dutch boor. They are a small hardy race, capable of enduring a great deal of fatigue, but in every way sadly neglected, never groomed, and badly fed.

The Circassian Horse.

The Circassian horse, although inferior to the Persian, does not often find his equal among the predatory hordes with which this part of Asia abounds. Almost every family of distinction aims at possessing a peculiar breed of horses, excelling in their estimation that of any other tribe—each breed is distinguished by its peculiar mark. The most valuable breed of all is in the possession of the reigning family, and its distinguishing mark is a full horse shoe. These horses possess great strength and speed.

The Birman and Chinese Horses.

In Siam, the horses are few and inferior to those of the Birman Empire. In Cochin China, on the eastern coast of the Peninsula, the horses are still small, but they are better formed and more active, and stronger than they are in Siam. In Sumatra, and Java, the horses have not increased in size, but in form and usefulness, they scarcely yield to any in the south-west of Asia. In Borneo, they are few, and scarcely deserving of notice. The horses of China are, generally speaking, small, ill-formed, weak, and without spirit.

History of the English Horse.

During the occupation of England by the Romans, the British horse was crossed to a considerable extent by the Roman horse, and yet, strange to say, no opinion is given by any historian, Roman, or English, as to the effect of this. After the evacuation of England by the Romans, and its conquest by the Saxons, considerable attention was paid to the English breed of horses, and we know, that after the death of Alfred, and under the reign of Athelstan, several running horses were imported from Germany ; this being the first historical intimation we have had of running horses in England.

Shortly before the Norman Conquest, a horse was valued at thirteen shillings, a mare or colt at twenty shillings, and an untrained mare at five shillings.

William the Conqueror took great pains to improve the English breed, introducing many fine steeds from Normandy, Flanders, and Spain. This Monarch owed his success at Hastings to his cavalry. During the Conqueror's reign, the then Earl of Shrewesbury, Roger De Belesme, brought a number of Spanish horses to his estate. The breed issuing from these is highly eulogized by Giraldus Cambrensis, and Drayton.

In the reign of Henry the First, we have an account of the first Arab horse imported into this country. It

was presented by Alexander I., King of Scotland, to the church of St. Andrew's, together with valuable accoutrements, and a considerable estate. History, however, is silent as to the purpose to which this animal was devoted, or as to what became of him.

King John paid great attention to the improvement of horses for agricultural purposes, and to him they should be indebted for the origin of their draught horses. He chiefly imported Flemish horses, and such was his anxiety to possess the finest stock from those, that he would accept horses as rent for crown lands, and as fines for the renewal of leases.

Edward III. purchased a considerable number of Spanish horses, the offspring of the Arabs, which had been introduced into their country by the Moors.

Prince Edward, son of Henry III., was not deficient in that acumen, which has subsequently characterized the adherents of racing. Being taken prisoner with his father, at the battle of Lewes, by the Earl of Leicester, during some of the time he was in captivity, he was permitted to enjoy equestrian exercise, escorted by soldiers. Till the reign of Henry VII., we have few other accounts of the progress of the English horse.

The principal ancestors of the English race horses, were the "Byerly Turk," ridden by Captain Byerly, as charger in Ireland in 1689; the "Darley Arabian," in 1712; the "Godolphin Arabian," in 1753; "Flying Childers;" "Goldfinder," another great horse foal, in 1764; "Eclipse," "King Herod," and several other great horses.

The English Dray Horse.

This horse is the largest of his species, standing 17 hands high. He is unquestionably a gigantic brute, and by no means a useful one. They form the principal obstruction in the streets of London; their slow movements, and the ponderous vehicles to which they are attached, compelling all carriages in their rear to move

in the same slow pace, to the great annoyance and inconvenience of the public.

The Scotch Horse.

This horse is met with in both countries, north of Dee, and is a favorite horse in England; their stature is from 15 to 16 hands high. They are strong and hardy, yet active; the breed was originally from Flanders. The Clydesdale is larger than the Suffolk, and has a better head, a longer neck, a lighter carcass, and deeper legs; strong, hardy, pulling true, and rarely restive. The southern parts of Scotland are principally supplied from this district.

The Irish Horse.

The Irish horse is so well known to my readers, that it is needless to say much about him; but as all English writers on horses, have the effrontery to proclaim to the world that the Irish horse is a weedy-leggy, ragged-hipped, large-headed, worthless brute, although well aware that the best hunters in England are Irish horses. I would ask those gentlemen, was it not an Irish horse that won the great St. Leger in 1820—the great Newcastle cup in 1836 and 1837, and the Doncaster cup in the latter year? and it is well known, that from the year 1820 to 1837, hundreds of races have been won by Irish horses in England. Was it not an Irish horse that won the Newcastle and Goodwin cups in 1838; and were not the Newcastle and Goodwin cups, and Cæsarwitch stakes, won by an Irish horse in 1839, and the Doncaster cup in 1840 and 1841, and also the great Derby in 1841, and the Doncaster and Chester cups in 1842—and again the Doncaster cup in 1843; the great St. Leger and Cæsarwitch stakes in 1844? Was not the great St. Leger again won by an Irish horse in 1845, and the Cæsarwitch stakes won in 1847, by "Cawrouch," an Irish horse, the property of Doctor John O'Neill, of Fermoy; and in 1848 and 1852, were not the Chester cup, the great Derby, and the Oaks won by the Irish

horse "Daniel O'Rourke;" and again in 1856 and 1857, were not the great St. Leger, the Yorkshire handi-cap, and the Ebor stakes won by an Irish horse? I could, if necessary, give the names of numerous other horses that have beaten the best English horses. I may add, that the French sportsmen, witnessing the great performance of Irish horses all over the world, bought some of our best racing sires. The great horse, "Faugh-a-Ballagh" was one, after winning the great St. Leger, and Cæsarwitch stakes in 1844; "Irish Birdcatcher," a horse that was never defeated, was another; the "Baron," by "Irish Birdcatcher," was also bought by the French, at a most incredible price, having won many races in 1844, and the great St. Leger in 1845.

The gets of the above-named horses, won the principal races in France, Germany, Austria, Russia, and England, for the last sixteen years. It was one of "Faugh-a-Ballagh's gets that won the great race at Bois-de-Boulogne, in Paris, last May—prize of 100,000 frances, beating the great English horse "Blair Athol," winner of the Derby, and the enthusiasm of the French spectators rose to such a height, that the French press designate it a real political event. A few days after, Count F. de Legrange brought over to England another of "Faugh-a-Ballagh's" gets, a chestnut mare, 15 hands 2 inches, called "Fille d' Hair;" she was entered for the great Oaks race, and won at her ease, beating the best horses in England; also the great Liverpool steeple chase for 1864, where 30 of the best horses in Europe started—five out of the first seven were Irish horses, and it was the courage and speed of an Irish horse, bought at the fair of Cahirmee, County Cork, that saved Napoleon III. in 1859, at the bloody battle of Magenta, from being an Austrian prisoner.

It is said that a good horse has fifty-four properties, that is to say, two of a man, two of a badger, four of a lion, nine of an ox, nine of a hare, nine of a fox, nine of an ass, and ten of a woman. It is also said that a good

horse should have three qualities of a woman—a broad breast, round hips, and a long mane; three of a lion—countenance, courage, and fire; three of a bullock—the eye, nostril, and joints; three of a sheep—the nose, gentleness, and patience; three of a mule—strength, constancy, and foot; three of a deer—head, legs, and short hair; three of a wolf—throat, neck, and hearing; three of a fox—ear, tail, and trot; three of a serpent—memory, sight, and turning; and three of a hare—running, walking, and supleness.

Galloways and Ponies.

A horse between 13 and 14 hands high is called a galloway, from a breed of little horses, once found in the south of Scotland, but now degenerated. There is a tradition in that country, that the breed is of Spanish extraction, some horses having escaped from one of the vessels of the Grand Armada, which was wrecked on the neighbouring coast. This district, however, so early as the time of Edward the First, supplied that monarch with a great number of horses. There are very good galloways in the county Galway, and also in Kerry. In 1754, Mr. Croker's galloway went 100 miles a day, for three successive days; a galloway belonging to Mr. Sinclair, performed the extraordinary fete of 1,000 miles in as many hours.

Some of the Connemara ponies are very handsome; they have a small head, high withers, deep round barrel, short joints, and flat legs; some of the Welch ponies are ill-made, large-headed, short-necked, ragged-hipped, but safe to ride. The new Forester ponies are generally badly made, but very sure-footed. The Exmoor ponies, although ugly, are hardy, and useful. The Dartmoor pony is larger than the Exmoor, and if possible uglier.

The Highland pony is far inferior to the Galloway; the head is large, he is low before, long in the back, short-legged, upright in the posterior, slow paced, and

unpleasant to ride. The Shetland pony, called in Scotland, Sheltic, is a very diminutive animal, sometimes not seven hands and a half high; he is often very handsome, with a small head, good tempered countenance, a short neck, fine towards the throttle, shoulders low and thick—one of them 3 feet high, carried a man of 12 stone, 40 miles in one day. It has been disputed whether the pony and large horse were, or could have been originally from the same stock; the question is difficult to answer. The Arab ponies are very fast. I had a chestnut pony in Poona, East India, that carried me half a mile in one minute. I matched him against a celebrated pony (the property of the King of Persia) in 1855, at the above distance, which he accomplished on that occasion in 57 seconds, beating his opponent by three lengths.

The Ass.

This animal belongs to the same natural genus as the horse, and has been under the dominion of man from the earliest ages of which we have any account. He seems to have been sooner domesticated than the horse; for we find asses mentioned in the 12th chapter of Genesis, as domesticated 1920 years before the Christian era, although nothing is said of the horse.

The Mule.

It is not known where mules were first bred. The first mention of them in the Sacred Writings, is 1740 years before the Christian era. In the book of Genesis, it is said, "This was that same Anah that found mules in the wilderness, as he fed the asses of Libeon, his father!" It is disputed whether he was the first breeder of them; Aristotle and Pliny were of opinion that he was; however that may be, mules do not appear to have become common in India, until the reign of David, which was about 300 years after the death of Anah.

We think it very improbable that wild mules were found, as hybrids are only known to be generated under the influence of domestication, or, if the manner of engendering mules were known to the Israelites, that people probably desisted from breeding them, in consequence of the Divine law against their propogation; for it is said, "Ye shall keep my statutes, thou shalt not let thy cattle gender with diverse kind." It is therefore likely, that the mules which David and his nobles rode, were imported from other countries. In Greece and Cappadocia they abounded in early times.

Teeth Characterizing the Age.

The teeth of animals are formed or fitted for the food on which they live. There are three sorts of teeth—cutting teeth, canine teeth, and molar teeth. Man has thirty-two teeth; those in the front are cutting teeth, or incissors, these behind, and with which he grinds his food, are molar, or grinding teeth, and the sharp pointed teeth on each side of the incissors, are the canine teeth. The canine teeth are best seen in the mouth of the cat, the dog, the lion, and some others. In each jaw of a man there are four front teeth, or incissors, two canine teeth (called also eye teeth), four small grinders, and six huge grinders—in all sixteen teeth. Children have but twenty teeth at first, or ten in each jaw; these are called milk teeth, because they appear, for the most part, while the child lives on milk. The teeth of the mole are fitted to crush the hard horny coverings of insects, and to knaw the roots of plants where worms are found; while dogs, cats, bears, and others of this family have teeth formed for cutting the flesh on which they feed. The Greenland whale has no teeth, but fibrous horny plates, which are fringed, and known as whalebone. Gnawing animals have two long teeth, which project forward from each jaw, and which have an edge like a chisel, while the horse and ass have to seize and crush the grass and grains on which they live. Man can tell

from the teeth, what are the habits of an animal. A lion with the teeth of a horse, could not subsist; and a horse with the teeth of a lion would starve.

A colt is usually foaled with six grinders in each jaw, three on each side; in ten or eleven days, he puts out two nippers in front, above and below; in a fortnight after, the two middle ones appear, and in three months from this, the corner nippers are pushed out; from this, until he is a year old, no great change takes place, except that the cavity in the nippers begins slightly to fill up, and appears worn; he has likewise now four grinders on each side, above and below three of the milk set, and one permanent; at a year and a-half, the cavity in the nipper is nearly filled up, and he has now three milk, and two permanent grinders in each jaw, above and below.

At two years the mark in the nippers is wholly effaced, and they appear like the same teeth in an eight years old horse. At this time also, the first milk grinders, above and below, fall. At about two years and a-half old, the two front nippers fall out; and as the permanent ones are some little time coming to perfection, a colt may experience some difficulty in grazing. Between three and a-half and four years old, the two next nippers appear, above and below. About four and a-half years, the two corner nippers fall out to give place to the last set; soon after this the tusks appear; from this period, he is no longer a colt, but a horse, and if a female, on the falling off the corner nippers, she drops the name of filly, and assumes that of mare. At five and a-half, in a natural state, the internal wall of the corner nippers is on a level with the rest, and the tusks completely come out. At six years old, in general cases, the black mark, or cavity, in the two front lower nippers, which was before wearing, is completely effaced. At seven years old, the same mark or cavity in the two next, or intermediate teeth, of the posterior jaw, likewise, is completely worn out. At eight, the cavity in the lower

corner teeth is lost, and now a horse is said to be aged. Total number of teeth 40. Some horses have been known to live to 47 years.

The following comparison was drawn between the ages of man and horses, by Mr. Blaire. That it is at these several periods of comparison the constitution of man and the horse may be considered as in an equal degree of perfection or decay, according as youth or age preponderate; thus, the first five years of a horse may be considered as equivalent to the first twenty years of a man, *i.e.* that a horse of five years may comparatively be considered as old as a man of twenty; a horse of ten years, as a man of forty; a horse of fifteen, as a man of fifty; a horse of twenty, as a man of sixty; a horse of twenty-five, as a man of seventy; of thirty, as a man of eighty, and of thirty-five, as a man of ninety.

SECTION II.

BREEDING OF HORSES—HOW TO BUY A HORSE—TRAINING OF HORSES—STABLE MANAGEMENT AND FEEDING—DRESSING OR GROOMING—THE FEET—EXERCISE.

Breeding of Horses.

From its general magnitude, prevalent fashion, and great utility, is certainly entitled to precede every other subject upon which we shall have occasion to enlarge, and will afford ample opportunity, to introduce such remarks and instructions, as may evidently tend to improve what has now become so universal, that the world at large, either in pleasure, agriculture, or commerce, seems interested in its success. Previous to embarkation in so extensive a field for investigation, it may be applicable to observe, that whatever opinions may be promulgated as matters of recommendation, they are not to be considered the delusive effect of speculative rumination, but the result of long experience and

attentive observation, among horses of every country, from brood mares and colts, to every description, whether for the turf, field, road, or draught.

Although some of the subject upon which we proceed to treat, may have been slightly mentioned by writers who have gone before us, it is generally known to have been in a superficial and unconnected way, that little information or instruction could be at all gleamed from their endeavours.

Breeding, though a subject of palpable importance to the improvement of this most useful animal, seems to have received less assistance from literary exertion than any that has ever attracted the time or attention of those naturalists, who have in other respects contributed largely to the advantage of the public. It will come home to the remembrance of every reader, when taking a mental survey of his rural neighbours, amongst whom he will perfectly recollect some one or more so invincibly attached to the merits of a cheap spider-legged stallion, or the virtues of his own ring-bone mare, destitute of judgment, and deaf to remonstrance; he ranks (in imagination) the produce of a prodigy, even in embryo, and proceeds year after year increasing the number, without a single addition to the improvement of the species.

These are the kind of hypothetical breeders that surround us, who calculate doubly in error, without a single reflection upon loss, ridiculously supposing a mare in foal, after delivery, can support her own frame, and that of her offspring, upon less food than any other horse or mare in constant work, and begin breeding under an idea, that it will be attended with little or no expense; thus, totally inadequate, (or indifferent) to the generating of flesh, blood, and bone, by the effect of nutrition; they penuriously and inhumanly adopt a kind of temporary poverty, and after a year or two of artificial famine, seem greatly surprised, that air and exercise alone could have not produced a colt of equal size,

strength, and perfection, with those who have omitted no expense, or necessary acquisition, that could in the least contribute to the formation of points so very desirable in objects of such tedious expectation, and no little anxiety before their merits or deficiencies could be at all satisfactorily ascertained.

Those who succeed best, and render the business of breeding a matter of importance, adhere closely to the plan of producing a distinct stock, for either the turf, field, or draught, by a direct systematic union of the requisite qualifications in both sire and dam; for although it remains, and in all probability ever will, a matter of ambiguity why an unblemished horse and mare may produce a colt or filly full of disease or deformity, it by no means follows, that a diseased or deformed sire and dam are equally to produce a progeny of perfection. This being unequivocably admitted, (as by every impartial investigator of nature it certainly must be), it will undoubtedly prove an act of consistency to evade so palpable a chance of disappointment, by forming an union of propriety, apparently calculated (from every external appearance,) to transmit such original purity to their produce.

To effect this, the mare having been obtained, corresponding in size, frame, bone and strength, with the wish of the breeder, and found, upon accurate examination, to be perfectly free from the blemishes and defects so frequently mentioned, the choice of a stallion becomes the object of serious attention; in him should be accumulated all the points and good qualities it is possible for a single object to possess, upon a proof exceeding all speculation, (and this every observant naturalist will allow) that the produce, whether male or female, much more frequently acquires and retains, the shape, make, marks, and disposition of the sire, than the dam; and although such assertion may not obtain immediate credit with many, yet, rigid observation has long since demonstrated the fact, and justifies the great consistency of rejecting

stallions with the least appearance of disease, blemish, or bodily defect, indicating even the slightest probability of transmission to the offspring.

Supposing a neighbouring stallion, and such there generally is in every part of Ireland, to have great recommendation in his favor. As to the matter of common inquiry, and fashionable figure, it is still necessary to descend to the minutiæ of symmetry in the head, neck, shoulder, fore-hand, ribs, back, loins, joints, and pasterns, attending to a strict uniformity in the shape, make, and texture of the very hoofs, and were it possible, (which in almost every case it certainly is not) even to ascertain the temper and disposition of both sire and dam, rather than be accessory to a procreation of vices, or imperfections, that by a more judicious election may be so easily avoided. After all that can possibly be written (and if it were probable that all could be universally read) upon this subject, every reader possessing the power of free agency, has still the privilege to reject any opinion not perfectly coincident with the plan he may have adopted, and to enjoy the uncontrolled right of persevering in his own decision; but presuming on the task I have undertaken, I strongly recommend a proper examination to discover the state of the wind, spavins, curbs, tendency to cracks or grease, bad confirmation of the feet, as corns, thrush, or long and narrow-heeled hoofs, either of which would furnish sufficient foundation to prejudice me against him as a sire, however well I might be pleased with his other most promising perfections. The necessary qualifications for both sire and dam having been fully investigated, and the blemishes, defects, and local contingencies, that tend to forbid the attempt fairly explained. We come now to the crisis of delivery, or the mare's bringing forth, an event so wonderfully accomplished by the unerring efforts of nature, that upon the fairest calculation, not one mare in a hundred suffers in any respect (more than the temporary disquietude) from an exertion of so much

magnitude, although in the moments of reflection it absolutely becomes a matter of admiration how the shock is sustained, without a much greater frequency of the danger that so seldom happens.

The mare having been freed from her burthen without inconvenience, and no circumstance arising to forbid it, let her be immediately removed to a healthy and luxuriant pasture, calculated to furnish not only a sufficiency of support for her own frame, but affording a superfluity for the nutritious support of her young.

How to buy a Horse.

The first thing to be attended to is the form of the animal; the head should be fine, and broad between the eyes, and tapering towards the nose—the jaws clean, and not possessing to much flesh—the eyes full, sparkling, and bright—the nostrils large, open, and of a clear red—the space underneath between the jaws should be roomy, and free from lumps or swellings—the ears small, set well into the head, and pointing forward—the neck well curved, lightly formed, and rather muscular, also well arched beneath, *i.e.* at its union with the jaws—the shoulder high and sloping—the withers of a medium breadth, and not to high, as it will be found that high-withered horses are narrow in the chest, which is a bad point, inasmuch as it does not allow sufficient room for the lungs to play—the back should be short, and a little arched across the loins—the chest deep, and the ribs expanding, especially between the last rib and the hip, so as not to permit of a hollow betwixt them—the thighs should be muscular to the hocks. See that the fore-legs are muscular to the knee, and the feet nearly circular, gradually increasing as they descend towards the sole.

The position of the legs and feet, or what may be termed their setting-on, is a most important point; viewing the horse in front, his legs should be as nearly straight as possible, and his feet neither inclining to the

right nor left; feet turned outwards are very liable to cut and trip, and the action is seldom good or agreeable. Horses with an inward inclination are pigeon-toed, and have a labored action. The fore-legs should be set well under the shoulder, affording ample support to it—such as have their legs placed forward, possess neither power nor action. The hind legs should either be straight from the hock downwards, or have a slight inclination under the belly, but not too much. That horse is sound in which there is no disease, or alteration of structure in any part, that is likely to impair its natural usefulness. The term *natural usefulness* should be understood. One horse may possess great speed, but no power of endurance; another will work all day, but cannot be urged beyond a slow pace; one with a heavy forehead, is liable to stumble; another, with an irritable constitution, and washy make, loses his appetite, and begins to scour if a little extra work is exacted from him. The term unsoundness, cannot be applied to either of these, it has reference only to disease, or alteration of structure. Any of the undermentioned defects will constitute an unsound horse, *i.e.* broken knees, (if a stumbler) capped hocks, contractions of the foot, corns, chronic cough, roaring, wheezing, high blowling, grunting, broken wind, crib, biting, enlarged hock, lameness, ossification of the cartilege, pumiced feet, quittor, sand crack, splint (if interfering with the action), thickness of the back sinews, thrushes, wind galls (if large), ringbone, spavins. Be also particular about the crown of the head, to ascertain if he has the poll evil; examine his nostrils, and if there is a fetid discharge, he is glandered, or otherwise affected with a nasal gleet. To be sure of this, the nostrils should be pinched together for about a minute, to prevent him from breathing, and on removing the hand, he is sure to snort, which will blow out any matter if he is diseased. The tongue should also be looked to. Examine the eyes for *gutta serena* and blindness. See that the withers are not fistulous.

Carefully examine the knees, because a horse with broken knees must be suspected for stumbling. See that there is no splint below the knee, or grogginess in the region of the fetlock, nor ring-bone of the pasterns, or thorough pin of the hock joints; attend to the hocks in case they are capped; notice also that there is no symptoms of curb a little way below these points. Examine the inside of the hock in case of bone-spavin; descend to the feet, and see if there are symptoms of grease. See that there does not exist *sand crack* in the horny substance of the hoof, nor canker separating the horny substance from the sensitive part of the foot. Be very particular about examining the teeth; take care that he is not bishoped, or had a tooth extracted. A horse with an upright shoulder is more fitted for harness than riding, and a sloping one is best adapted for riding, from having generally better action, and less of his own weight to sustain on his fore-legs. Horses that stand with their hind legs much under them, may be suspected to be diseased in the spine, or kidneys, and should be carefully examined on these points, and while doing so, do not permit the dealer, nor his servant, to hold up the horse by the bridle, or to stand on rising ground. Dealers' servants take care to bring horses to a stand with their fore-legs on rising ground, and thereby conceal any knuckling of the knees or pasterns, and will give a groggy animal all the appearance of soundness. To ascertain whether a horse is a roarer, piper, or whistler, place him with his side against a wall, or the side of a stall, take hold of the bridle, near the mouth, and hold his head high, then give him a smart blow on the ribs with your fist, and if he grunt at each blow, he is a roarer; on the contrary, if he dances about in consequence of the blows, sobbing, and drawing his breath quickly, he is sure to be a whistler, or a piper; but for testing all diseases of the lungs and air cells, nothing is better than a gallop, or a smart trot.

A man should consider no time lost that is spent in thoroughly investigating all points connected with

the health of the horse. In looking at the action of a horse, see that his fore feet are lifted well, and that he completely clears the ground, and throws his legs out freely and lightly. In trotting, see that the horse does not lift his feet too high, and that he replaces them firmly and flatly on the ground, for if the toe first touches the ground, he is liable to stumble or to trip. If the shoe be examined, it will indicate the part which first comes to the ground, by being most worn down.

Training of Horses.

Kind treatment and caresses, are the only sure methods to obtain obedience, attachment, and confidence in man. This maxim should be applied to horses even of the most stubborn temper, for assuredly, if gentle measures will not render them obedient, harsh treatment never will. In short, most of the vices in horses, may be traced to their being only instructed by persons of brutal disposition, who destroy their temper by cruelty, and injudicious severity; others again are taught all manner of tricks, for the gratification of idle folly. Tractability, steadiness, and good temper, are the qualities for which a horse is chiefly valuable to man, so that the utmost attention should be paid by breeders, to points on which depend so much of the safety and comfort of those who may become their owners.

After the colt has been partially broken in, the next thing to teach him is implicit obedience to his instructor; this should be effected by steadiness, and firmness, while severity should be carefully avoided. He should be spoken to in a soothing, rather than in an angry tone of voice—he must be taught to know the effect of the whip and spur; but then, these must be used with great caution, and only showing him that we have the power of enforcing submission. If a young horse refuses to allow the bit to be placed in his mouth, it must not be accomplished by force, because this will only redouble his resistance; coaxing, and gentle trials day by day,

will be the quickest means of accomplishing the object. He must be first taught to obey the action of the rein, and after he has become obedient to it, he must next be led round a ring on soft ground; when he has acquired his paces, and become obedient to this action, he should then be trotted round the circle, but at an easy rate, and only for a short time at once. When stopped, he should be caressed—he should be accustomed to go both to the right and left; if any circumstance occur which may frighten a young horse, and he refuses to proceed in consequence, another horse ought to be led before him, and he is almost sure to follow him. In performing these revolutions, he should be frequently stopped by the trainer, and pulled up gently, to show him that no injury is intended; he ought to be caressed at the same time. Should he become restive or frolicsome, let the person who holds the whip crack it, to show him he is there, but on no account should he touch the horse with it. If he happens to hold his head too low, shake the caveson to remind him to raise it. When the colt becomes tractable, and obedient in all his lessons, a crupper should be attached to his clothing, to accustom him to it, that he may not be afterwards tickled, and become restive by the rider's coat-tails. The regular riding bit should now be applied to his mouth; it ought to be large and smooth, to which should be attached the reins, buckled to the ring on each side. The trainer should occasionally stand in front of the animal, and take hold of each side near the mouth; gently press upon it, and thus begin to teach him to back, by the pressure of the rein, always rewarding obedience with caresses.

The colt should be taken to the street or road, and led about to accustom him to meet carts and other objects without starting or shying, but if he does start or shy, he should not be allowed to pass on, but ought to be quickly led up to the object of his fear, and shewn that it will not harm him; but on no account should he be beaten on such occasions, and should he still be shy, let

him be taken past the object of his fear, first at a greater distance, and then nearer, until he may be quietly led close to it; it is only by patience on the part of the breaker that these difficulties are overcome; whereas, if the animal is forcibly and suddenly taken up to the object before fear has subsided, a habit may be established which will never afterwards be eradicated. The next thing to be attended to, is to apply the saddle, which should be put on his back with great caution. The breaker should place himself at the head of the colt, and by caresses, and patting, divert his attention. Let one assistant on the off side put the saddle gently on his back, while another on the near side gets hold of the girths, and slowly tightens them, but not too much. On or about the third day, the trainer must then attempt to mount—at first, two assistants will be necessary. His first business will be to remain at the head of the animal, patting and caressing him, while the person who intends to mount, must first pull the left, or near stirrup, pretty heavily, with both hands, while the man on the off side presses gently on the other stirrup, and after having repeated this several times, the person on the near side must put his left foot into the stirrup, and gradually apply pressure to it, the man on the off side pressing on the other stirrup as before, until the colt will endure the whole weight of the rider mounted and leaning his hands upon the saddle, but if the animal proves very refractory, no further attempt must be made at that time; if this is in the morning, the same course may be pursued in the evening. During the operation, a handful of corn should be occasionally given to the colt, and when he becomes quite reconciled, the rider must apply pressure with his legs, and also a gentle touch with the heels, when he desires to quicken his pace, which will finish the progress of training. I would caution all those who ride horses occasionally used to harness, to keep a firm bridle hand, that is to feel the mouth constantly, because they are accustomed to depend

for support on the wheel carriage, and thus have a tendency to lean forward, and come down upon the road.

Stable Management and Feeding.

It is impossible for any man living, who has made the horse the object of his contemplation, not to feel the greatest mortification, when chance or choice brings him to a survey of the bad stables some horses have to live in, with all their horrid inconveniences. To those totally unacquainted with the superior and systematic management of stables in general, it may all bear the appearance of propriety, consequently paves no way for the corroding reflections of vexation and disappointment, but to the experienced and attentive observer, whose sensations move in direct union with the feelings of the animal he bestrides, and the accommodation of whose horse is held in equal estimation and retention with his own, they excite the joint emotions of pity and surprise. Horses in general produced from stables of this description, all bear the appearance of temporary invalids, from living, or rather existing, in a scene of almost total darkness; they approach the light with reluctance, and every new object with additional apprehension; they walk out of the stable in a state of debilitation and stiffness of the extremities, as if threatened with universal lameness; the legs are swelled from the knees and hocks downwards, to the utmost exhaustion of the integuments, which, with the dry and contracted state of the narrow-heeled hoof, bears no ill affinity to the overloaded shoe. Upon more accurate inspection, we find the list of happy effects still increased with those usual concomitants, inveterate cracks, running thrush, very frequently accompanied by a husky short cough, or asthmetic difficulty of respiration, in gradual progression to a broken wind.

The disadvantages arising from horses standing in perpetual darkness, or with a very faint and glimmering

light, must be too palpably clear to require much elucidation; for in such state, with the full and increased power of hearing, they are incessantly on the watch to discover what so constantly affects one sense, without the expected gratification of the other. To this eternal disappointment may be attributed the alternate stare and twinkling of the eye-lids, so common to every description of horses that stand in the most remote part of dark stables, at each time of being brought forward to face the light, as well as the additional observation, that being accustomed to see things but imperfectly in the stable, when brought into action upon the road, they are so much affected by the change, that they become habitually addicted to stop or start at every strange or sudden object that approaches; the stiffness of the joints, the swelling of the legs, the severity of the cracks, the frequency of the thrush, the contraction of hoofs, the difficulty of respiration, the want of general cleanliness; the want of pure air and regular exercise, may be justly attributed all the ills we have just recited; and that such assertion may lay impartial claim to proper weight, in the scale of reflection let it be first remembred, that horses in the situation I allude to, are constantly living in certain degrees of heat, not only beyond the state required by nature, but very far exceeding even the stable temperature of horses in regular training for the turf. That this may be better understood by those whose situation in life has precluded the chance of such inspection, and that body of readers in various and distant parts of Ireland, who never have, and perhaps never may, make a survey of public stables, I think it necessary to introduce an exact representation of systematic inconsistency, perfectly exculpated from even the slightest suspicion of exaggeration.

As I have observed, and it is universally admitted, that there is no rule without some exception, so the following description may have some, but very few, to boast of.

Upon entering the major part (particularly if the door has been a few minutes closed, and is opened for your admission) the olfactory and optic nerves are instantly assailed with the volatile effluvia of dung and urine, equal to the exhalation from a stock bottle of hartshorn; here you find from ten to twelve, or twenty horses, standing as hot, and every crevice of the stable as closely stopped, as if the very external air was infectious, and its admission must inevitably propogate a contagion. Thus surrounded with the vapours constantly arising from an accumulation of the most powerful volatile salts, stand these poor animals, a kind of patient sacrifice to ignorance and indiscretion; and that the measure of misery may be rendered perfect by every additional contribution of folly, each horse is loaded with a profusion of body clothes, but perhaps more to gratify the ostentation, or display the opulence of the owner, than any intentional utility to the horse. In this state horses are found, upon critical examination, to be in an almost perpetual lanquid perspiration, so debilitated, depressed, and inactive, for want of pure air and regular exercise, that they appear dull, heavy and inattentive, as if conscious of their imprisonment and bodily persecution.

The effects of this mode of treatment soon become perceptible to the judicious eye of observation; the carcass is seen unnaturally full and overloaded, for want of those gradual evacuations, promoted by gentle motion, the legs swell, becoming stiff and tumefied, till nature, in her utmost efforts for extravasation, terminates in either cracks, itch, grease, or some one of the many disorders arising from an impurity, viscidity, or acrimony in the blood.

The hoofs, by being almost invariably fixed to the constant heat of the accumulating dung before described, acquire a degree of contraction indicating hoof-bound lameness. The eyes frequently give proof of habitual weakness, in a watery discharge from the continual irritation of the volatile effluvia, the dilatation and

contraction of the eye in search of light, the heat of the body, etc., etc., all tending to constitute a frame directly opposite in health, vigour, and appearance, to those whose condition is regulated by a very different system of stabularian management.

The evils arising from this mistaken treatment are only yet enumerated in part, being those that evidently appear upon a superficial survey of the stables, and their contents; others become discernable upon being brought into action. They are certainly less enabled to encounter fatigue than any horse in Ireland, from so constant an existence in the absolute fumes of a hot bath. They never can be exposed to the external air in a cold, wet, or winter season, without danger to every part of the frame. By such contrast, they are instantly liable to a sudden collapsion of the porous system, which locking up the perspirative matter, so violently propelled to the surface, throws it back upon the circulation with redoubled force, where nature being too much overloaded to admit its absorption, it becomes immediately fixed upon the eyes, or lungs, laying a very substantial foundation of disease and disquietude. If such horse is put into strong exercise, he soon proves himself inadequate to either a long, or an expeditious journey; for whether the body is overburthened with weak and flatulent food and water at setting out, jaded with early fatigue, to which he has not been accustomed, or debilitated with the stable discipline we have so minutely described, the effects are nearly the same. If his journey is of any duration, or his exertions of any great magnitude, it is no common thing to find he has fallen sick, lamed or tired upon the road; he is next sold to the first bidder, under whose systematic care and rational mode of management, a few months perhaps makes him one of the best and most valuable horses in the kingdom.

This is a circumstance that happens so very constantly in the equestrian fluctuation of fortune, and the assertion so repeatedly justified by ocular demonstration, and

practical experience, that I stand not in the least fear of a contrarity of opinions upon so conspicuous a part of the subject.

Stable management.—This is a subject of considerable importance, but it is evident that the great variety of matter entering into this work will not admit of all the detail that may be wished.

Feeding forms the most essential part in the care of horses, and more error is committed on this head from want of knowledge of the internal economy of the horse, than is first imagined.

The horse is an animal intended for speed—is furnished with a very small stomach, but capacious intestines, he therefore should be fed but a little at the time; and as we know that whenever the stomach is empty, a great debility pervades the whole frame, and as a small stomach must be frequently empty, so we should frequently feed our horses, giving them but a little at a time. The general food of horses is herbage, green or dry, and grain, which is always dry. To horses under common labor, from 18 to 20 pounds of sound meadow hay, with a stone and a-half of oats, daily, will be fully sufficient for any horse, no matter how hard his work may be. Should anything lessen the work, one stone, with a bran mash at night, will be enough. Some persons, when hay is dear, and corn cheap, substitute wheaten straw for hay, others mix straw with their hay; but by far the most economical mode for the owner, and the most nutritious for the horse, is the use of chaff, which, when mixed with corn, is called manger feeding. Potatoes and corn mixed, or bran, with potatoes boiled and mashed, agree with all constitutions.

Carrots form an excellent food for horses, particularly for pursine and thick winded ones; turnips mixed with bran is also good food for farming horses, much better than oats and turnips mixed, as the latter frequently creates flatulency and colic.

Changing the food of horses is found very beneficial

to some—others do not thrive well on a change. In the spring, when horses cannot be turned to grass, it is peculiarly beneficial to soil them, that is, to allow them green food in the stable, but great care is necessary to give it fresh every day, or at farthest, every other day. It should never, likewise, be put together in large quantities, which gives it a disposition to ferment.

Watering of Horses is a part of their dieting that is not of trifling import. All horses prefer soft water, and it is more wholesome; so partial are they to it, that a muddy pond is an irresistible stimulus to every horse. It is not a good custom to warm water for horses, but it is a worse custom to give them water just from the well or pum, and this becomes more pernicious in summer, when well water is much colder than in winter, and likewise when a horse is heated by exercise. The quantity given should be regulated be the exercise, and other circumstances. In common cases, a horse requires more than half a bucket-full, and that three times a day. It is nonsense to suppose that abstinence from water increases the wind and vigor. Horses should never be galloped after drinking, it is the frequent cause of broken wind, nor should horses have much water given before eating; but on a journey, when the animal is very dry, give two quarts, then feed, and when that is done, give the remainder of the quantity intended.

Dressing or Grooming.

There are three intentions answered by dressing horses—it cleans them from dust and dirt—it counteracts the artificial state of long continued rest and inactivity they are under by their confinement, which it does by exciting the circulation—and lastly, it gives beauty and sleekness to the coat. Ignorant grooms consider only the latter intention, and as dressing requires much labor, they naturally resort to such means as produce a sleek smooth coat without exertion, and this, experience tells them, is best effected by hot stables. It is idleness

which has been the origin of this deviation from nature, but which, to give it a hold on the good opinion of their masters, grooms assert is intended to add to the health and useful qualities of a horse; but nothing is so absurd, nothing is so unnatural, and nothing is so productive of so many evils to this valuable class of animals as hot stables. Let the advocate for them live for a month (confined as many hours out of the twenty-four as horses are) in the dressing-room of a warm bath, they may become fine and delicate, but their vigor and durability will be lost.

The Feet.

The feet are always an object of particular attention with every prudent horseman. Every morning the feet should be carefully picked and examined. Observe whether the shoes are fast, what state they are in, whether the clenches are sprung, so as to cut the horse. Where the feet grow fast, the shoes ought to be removed once in every three weeks, whether the shoes are worn or not. A want of attention to this particular is the ruin of many horses; ignorant grooms imagine that because the shoes are not worn out, the hoofs want no alteration. The moment a foot becomes too high, so soon it begins to contract; in hot weather particularly, if the feet are naturally of a dry hard kind, they should be stopped every night with cow dung and yellow clay, and not to forget to have them picked the following morning.

Exercise.

Nothing is so convincing a proof of the necessity of exercise to animals, as their love of play in the state of nature, from which natural act we likewise infer, that it is much more necessary to the young and to the robust, than to the old and to the weakly. Survey a spirited horse with the eye of attention, and observe the astonishing difference before and after his liberation from the manger, to which he is sometimes (under the

influence of strange mismanagement) haltered for days together without remission. In the stable you perceive him dejected, spiritless, and almost inanimate, without the least seeming courage or activity, but when brought into action, he instantly assumes another appearance.

The advantages arising from an unremitting perseverance in the regularity of daily exercise (both in respect to time and continuance) cannot be clearly known, and perfectly understood, but to those who have attended minutely to the good effects of its practice, or ills that become constantly perceptible from its omission. This is undoubtedly the more extraordinary, when it is recollected there is no one part of the animal economy more admirably adapted to the plainest comprehension, than the system of repletion or evacuation, which may (avoiding technical description and professional minutiæ) be concisely explained and clearly understood, as matter necessarily introductory to what we proceed to inculcate, upon the palpable consistency of constant and moderate exercise, for the establishment of health and promotion of condition.

It is very necessary we should take a survey of a horse brought from the stable in a state of plenitude, after temporary inactivity, when we find the body too full and over-loaded, to make his first efforts with any degree of ease or pleasure; every one not totally absorbed in a state of stupefaction, or natural illiteracy, must have observed the unremitting attempts and strainings of the animal to throw off the superfluous burden, by repeated evacuations so soon as brought into action. If at all hurried before the carcass, is in some degree relieved from its accumulated contents, you perceive a weezing or difficulty of respiration, occasioned by the pressure of the stomach thus loaded, upon the lobes of the lungs, restraining them in their natural elasticity for the purposes of expansion and contraction.

In this style also, if his pace is extended beyond a walk, you find him break into a more violent perspiration

than a horse in proper condition and regular exercise would display in a long journey, continued at the same rate without intermission. These are all indications of nature not to be mistaken, or denied, by those at all connected or conversant with the subject before us, and sufficiently demonstrate the resulting effects of continuing to overload the system with a greater quantity of food, than there is proportional exercise to carry off.

Perspiration, that is the gradual emission (physically termed insensible, as not being profuse to perception) will, in even gentle exercise take from the superflux of the blood, what the necessary evacuations of dung and urine take from the accumulated contents of the intestines, which if suffered to remain in an abundant and preternatural proportion, must by its compulsive retention, acquire a degree of putrid or acrimonious morbidity, inevitably producing disease.

These morbid attacks act differently upon different subjects, according to their state or tendency, at the time of the blood or body assuming a corrupt or infectious influence, displaying itself in such a way as is most applicable to the constitutional predominance of disease in the horse, previous to the least trait of discovery.

Exercise in all its particulars of manner, distance, and duration, must be entirely regulated by contingent reflections upon the health, state, and condition of the subject; so it must be perfectly clear, that the recommendation of certain exercise to horses in a high state of health and condition, cannot be supposed to extend to those under physic, or in different states of recovery from disease. Such must unavoidably receive judicious regulations from the parties concerned, as the kind of daily exercise we now have in contemplation, only appertains to horses in health, the preservation of which is the present object of consideration. All the observations under this head have been introduced to demonstrate the utility of exercise in general, and the ills that certainly arise from the want of it.

SECTION III.

NAMES OF MEDICINES USED FOR HORSES—VARIOUS FORMS OF MEDICINE — BALLS, AND HOW THEY ACT — POWDERS — DRENCHES — CLYSTERS — OINTMENTS — FOMENTATIONS — POULTICES — BLEEDING — PHYSICING — FIRING — BLISTERING — GELDING — ROWELS AND SETONS—SHOEING.

Names of Medicines used for Horses.

Acids
Aether
Aloes
Alum
Ammonia
Aniseed
Anodynes
Antimony
Arsenic
Aasafœtida
Astringents
Balsam
Bole Armenian
Bark
Benzoin
Blisters
Blue Vitriol
Butter of Antimony
Black Antimony
Calamine
Camphor
Calomel
Castor Oil
Cathechu
Cantharides
Caraway Seeds
Chalk
Caustic
Cascarilla
Columbo Root
Canella Bark
Chloride of Lime
Chloride of Soda
Cummin Seeds
Chamomile
Charcoal
Corrosive Sublimate
Cream of Tartar
Croton Oil
Decoctions
Digestives
Digitales
Diuretics
Drenches
Epsom Salts
Emetic Tartar
Escharotics
Euphorbium
Expectorants
Extract Saturn
Fomentations
Ferri Sulphus
Gentian
Ginger
Gum Myrrh
Glauber Salt
Glysters
Goulard
Grains of Paradise
Garlic
Hemlock
Honey
Hartshorn
Hellebore
Hogs' Lard
Iodine
Infusions
Jalop
Japan Earth
Juniper
Kali
Laudanum
Liquor Ammonia
Linseed
Lead
Lime
Liquid Blister
Liquorice
Madder
Malt
Mercurial Ointment
Myrrh
Marsh Mallowes
Nation
Nitre
Nitric Acid
Opium
Oil of Olives
Oil of Wormwood
Oil of Turpentine
Oak Bark
Oil of Elder
Oil of Bay
Oil of Linseed
Oil of Palm
Oil of Amber
Oil of Anniseeds
Oil of Caraways
Oil of Juniper
Oil of Tar
Oil of Origanum
Oil of Vitriol
Pepper
Pitch
Potash
Precipitate
Purges
Quassi

Quick Silver	Savin	Tar
Resin	Soda	Tobacco
Rue	Spanish Flies	Tonics
Rhubarb	Squills	Unguents
Salts	Spirits of Wine	Vitriol
Sal Amoniac	Spirits of Aether	Vinegar
Salt of Steel	Spirits of Turpentine	Willow Bark
Salt of Tartar	Sulphur	Zinc

The various forms of Medicine.

The usual forms in which medicine is administered to a horse are those of balls, powder, drenches, clysters, ointments, fomentation, and poulticing; also, bleeding, blistering, and physicing.

Balls.

There are some circumstances in the preparation of this form of medicine not in general sufficiently attended to by farriers. Substances that are volatile do not keep well in balls, and therefore should only be made when used. The same caution is also requisite with such as liquify by the absorption of air. All hard substances entering into balls, should be finely powdered, and the moist matter that is to form them into an adhesive mass, should be of a nature that will neither ferment, nor become mouldy. Very dry and bulky powders are no way so conveniently formed into a mass, or keep so well, as by the addition of lard or palm oil.

Diuretic Balls, and how they act.

As we have but little power over the skin of the horse, so we have correspondently a greater one over the kidnies. In the human being, the reverse of this is the case; and the articles that act on the human kidney, appear to do it more by a sympathetic effort of the stomach, whereas, diurectics in the horse, at least the greater number of them, appear to act primarily on the kidnies by determining a greater quantity of blood to them, and by stimulating them to separate a larger

quantity of water from it; the blood, therefore, losing an unusual proportion of its serum, or watery part, must be supplied from other sources; this is done by the absorbing vessels, which take up, in that case, any superfluous fluids they meet with to supply the deficiency.

Diuretic Ball.

Resin, yellow	3	drachms.
Nitre	3	,,
Common Turpentine	2	,,
Yellow Soap	3	,,

Diuretic Powder.

Resin	2	drachms.
Nitre	3	,,
Cream of Tartar	3	,,

To be given in bran mashes.

Tonic Ball, No. 1.

Gum Myrrh	3	drachms.
Green Vitriol	2	,,
Oak Bark Powder	3	,,
Ginger	1	,,

Tonic Ball, No. 2.

Arsenic	10	grains.
Gentian Root	3	drachms.
Cascarilla	3	,,

Any of the above tonic balls are supposed to exert their influence on the muscular fibre, and to improve their tone; this they do in some instances through the medium of the stomach, and are then called stomachs. Tonics are therefore stimulants of permanent action.

Alterative Ball, No. 1.

Sulphur	4	drachms.
Black Antimony	3	,,
Resin	3	,,
Nitre	2	,,

Alterative Ball, No. 2.

Calomel	half drachm.
Cream of Tartar	2 drachms.
Digitalis	half drachm.

Alterative balls are supposed to act medicinally on the body, in a slow and nearly imperceptible manner. The nitre increases the urinary discharge, and keeps down the accumulation of fluids in swelled legs, and other enlargements. Resin is an active diuretic alterative, but it simply empties the system, while white nitre is a refrigerant also. Cream of tartar is an excellent alterative, particularly in conjunction with merculias and sulphur, in breaking out surfeits. Digitalis is likewise a useful alterative in watery accumulations.

Cordial Ball, No. 1.

Gentian Root	4 drachms.
Ginger	3 ,,
Caraway Seeds	3 ,,

Made up with honey.

Cordial Ball, No. 2.

Camphor	1 drachm.
Coriander Seeds	2 ,,
Ginger	3 ,,
Oil of Aniseed	½ an ounce.

Cordials.

These, with stomachs and tonics might perhaps all of them be properly defined under one comprehensive term of stimulants, for in this property their utility principally depends. The mode of action of all of them in general cases appears to be by a sympathetic effect they excite between the stomach and the system.

Laxative Ball, No. 1.

Calomel	1 drachm.
Barbadoes Aloes	3 ,,

Made up with Castile Soap.

Laxative Ball, No. 2.

Barbadoes Aloes	4	drachms.
Ginger	1	,,
Calomel	½	,,
Nitre	2	,,

Made up with Common Soap.

Laxative may be denominated a milder purgative, but acting without irritation, and hence, much to be preferred in violent inflammatory affections. In some chronic cases also they are eligible, because they can be more frequently repeated.

Purgative Ball, No. 1.

Barbadoes Aloes	6	drachms.
Calomel	1	,,
Ginger	1	,,

Physicing excites the intestines to a more early, a more frequent, and a more copious discharge of their contents, and may be termed purgative. If this effect is intended to be produced in a slight degree only, it is termed laxative.

Powders.

Powders are generally composed of calomel, nitre, sulphur, antimony, and some of the aromatic seeds reduced to fine powder, and mixed with bran; such medicines as do not easily dissolve in water, should be moistened before mixing in the food.

Drenches.

In compounding a drench, it is necessary that the oils and balsams should be well combined with the watery substance, and the drench should be administered by a horn. The great advantages of drenches are the remedies exhibited in this form, which generally produce very speedy effects, and are consequently well suited to urgent cases where immediate relief is required.

Clysters.

All medicine which can be thoroughly mixed with any watery fluid, so as to pass easily through a slender tube, may be advantageously administered in the form of a clyster. A pewter syringe with a pipe about 12 inches long, and one inch in diameter, having the extremity very smooth, so as not to injure the internal coat of the bowels is preferred. The use of clysters has very properly become frequent, and is justly in high esteem.

Ointments.

Ointments are chiefly employed as an application to sores, or in cases of eruption of the skin; they cannot be used in farriery, as on the human body, on account of the hair that covers the body of the horse

Fomentations.

Fomentations are composed of some infusions or decoctions of herbs, and are used to soften or relax the parts to which they are applied. The proper method of applying them is by wetting a large woollen cloth in very hot water, and after wringing it slightly, laying it as warm as possible on the part to be fomented for a minute at a time.

Poultices.

Poultices should be reduced to a perfect softness, and frequently removed; when intended to produce suppuration, they should be applied warm, but when required to check inflammation, they are usually laid on cold.

A poultice to the extremities is applied by means of an old worsted stocking cut off at the ancle, the leg of it being slipped over the roof, is brought around the part, and secured below, by means of broad list not too lightly applied. The poultice is then put into the stocking by means of the hand, and afterwards secured above by another piece of broad tape loosely applied.

A Common Softening Poultice.

Bran, any quantity, pour boiling water to form a thin paste, add linseed meal, sufficient to make it adhesive; after this, stir in one or two ounces of sweet oil.

A Cooling Poultice.

Bran..... any quantity.
Carrots..... ditto.

Sugar of lead water to form a poultice, which as it dries moisten with more sugar of lead water.

Cleansing Poultice for Grease

or icherous discharge from other diseased surfaces, or for gangrenous wounds.

Oatmeal ..... half-pint.
Linseed Meal ..... ditto
Powdered Charcoal..... four ounces.
Stale beer grounds, sufficient to make a poultice.

Bleeding.

This operation is frequently necessary in the diseases of horses, and is performed either with a lancet or fleam in the neck vein. The blood should always be preserved, that the quantity drawn may be accurately known, and its quality ascertained. The principal object in drawing blood is to lessen its quantity, by which the remaining mass circulates with more freedom in the vessels. It likewise takes off the inflammatory tendency of the blood, removes spasms, and prevents other bad consequences that may follow, especially in plethoric habits; and it is always to be remembered, that when the symptoms of a disease are taken from the motion of the blood, the disorders arising from it depend upon its circulation being either increased or diminished. Hence, therefore, all the changes which take place in the quantity and quality of the blood are attended either with diminution, or an increase of its velocity.

Although the cases which may require bleeding are numerous, yet, one general caution is necessary, namely, never to take away blood but when it is absolutely necessary, for it is a fluid that may be easily taken away, but not so easily replaced. Besides the practice of bleeding frequently, or at stated times, is exceedingly improper, as it disposes the body to become weak and relaxed. In bleeding, therefore, a due regard must always be had to the constitution, age, strength, etc., of the horse, and the state or habit of the body it is in at the time

Although blood ought not in general be taken from horses on trifling occasions, when they may be said to be healthy, yet, when cases occur that do require it, it may not only safely, but usefully be recommended to take a greater quantity at once, than is usually done. For instance, from three to four quarts, according to the urgency of the symptoms at the time.

For as horses are very subject to inflammatory diseases, and those that are of the spasmodic kind, and as bleeding plentifully relaxes the whole system of the horse in these cases, the taking away a small quantity of blood, is, in fact, playing with the disease; the horse is then said to be blooded, and that satisfies the owner and farrier. Time is thus lost, the disease acquires strength, and it may then be beyond the power of art to mitigate or conquer it; hence, the horse falls a sacrifice to timidity and ignorance.

It is to be remembered that inflammatory diseases, particularly when the bowels are affected, make a very rapid progress in horses, and if they are not overcome at the beginning by bleeding freely, the horse commonly dies in 24 hours of a gangrene or mortification in the intestines.

Bleeding is sometimes the quicker method of giving relief in the beginning of inflammatory fevers, to which horses are very liable, it is also necessary in all violent acute pains, as in gripes or cholics.

Strangwry, or suppression of urine, in rheumatic complaints, is where the pain causes stiffness or lameness, and which frequently shifts from one limb to another, or when it affects the neck and occasions that stiffness and contraction of the muscles which is commonly called the chards in inflammation of the liver, the lungs, the plura, stomach, intestines, kidnies, bladder, or any of the internal viscera, in apoplexy, or giddiness, and in all disorders where the head seems affected.

On the other hand, bleeding is to be avoided in all cases of extreme lowness, or weakness, produced by fatigue, or disease, such as purging, or scouring, or diabetes, or excessive staling, or during the time of molting or shedding his coat.

Physicing.

In purging horses, great care and attention are necessary, the bowels being particularly irritable, and liable to inflammation. The physic generally given is too strong. I am certain that many horses have been destroyed by the immoderate doses that have been recommended by writers on farriery. The only certain and safe purgative for horses, is aloes; and of the different kinds of aloes, the Barbadoes is undoubtedly the best; and it is advisable to prepare a horse for physic, by giving him bran mashes for two days before he gets it, as the bran will gently relax the bowels, and remove any indurated faces that may be lodged in them—it will also tend to facilitate the operation of the medicine.

When the horse is purged for the first time, it is prudent to give a very moderate dose; were the common quantity given to one of weak irritable bowels there would be danger not only of producing great debility, and thereby of counteracting the intention of the medicine, but likewise of destroying the animal by bringing an inflammation of the bowels, and this is by no means an unusual occurrence. Should the first ball not

operate sufficiently, a stronger may be given after an interval of three days.

The morning is the best time for giving a purgative, the horse having fasted the night before; if he is disposed to drink after taking the ball, give him a moderate quantity of warm water, which will promote the solution in the stomach; during this day the horse is to be kept in the stable, except for twenty minutes in the evening, when he is to have walking exercise after he gets a drink of warm water.

The following morning he is to be exercised for an hour, and at this time the medicine will generally begin to operate; should the purging appear sufficient, he need not be taken out a second time, but when the desired effect does not readily take place, trotting exercise will tend to promote it.

On account of the horizontal position of the horse's body, it generally requires twenty-four hours to elapse before the medicine begins to operate, though it sometimes commences in a shorter period, but much depends on the constitution of the horse.

When purging continues longer than usual, and the horse appears to be considerably weakened by the evacuation, let the astringent ball be given, and the horse well clothed.

Prescription for Physic Balls.

No. 1.

Barbadoes Aloes	5 drachms.
Calomel	1 ,,
Aromatic Powder	1 ,,
Oil of Caraways	10 drops.

In one ball.

No. 2.

Barbadoes Aloes	6 drachms.
Calomel	½ ,,
Castile Soap	4 ,,
Ginger	1 ,,

With sirup enough to form the ball.

No. 3.

Barbadoes Aloes	7 drachms.
Calomel	½ ,,
Oil of Aniseed	10 drops.
Aromatic Powder	1 drachm.
Hog's Lard	3 ,,

In one ball.

Firing.

This becomes an important and a very salutary agent in good hands. The practice of firing was not always confined to quadrupeds; on the contrary, it probably was first used on man; to this day, in many countries, it is a popular remedy among human surgeons. In India, Persia, and China, it is applied over the abdomen for the cure of the ague; it is also used for white swellings, and numerous other complaints; nor would it be difficult to prove that we have no remedy in human surgery, except mercury, that can compensate for its disuse. Firing is performed on horses for two purposes, one for the forming a permanent bandage to a part, which it does by destroying the elasticity of the skin, and lessening its surface—the other is that of raising an active inflammation, and thereby exciting absorption. Sometimes it is used to answer one of those purposes only, and sometimes it is performed to promote both conjointly. The Arabs fire the joints of their young horses to strengthen them, by keeping a constant bandage on the foot—some English breeders of blood horses have done the same. This is an instance where firing is performed for the first purpose. In splints, spavins, and ring-bones, firing is used as a strong stimulus to the surrounding absorbents, to remove any extraneous substance lately deposited, hence, the bony matter so hurtfully thown out, which forms such swellings, becomes swallowed up by these vessels, and thus removed.

Blistering.

This is an operation of great utility, and is perhaps the safest that is performed. Blisters act by inflaming the skin, which drawing a large quantity of blood from the part, its watery portion, or serum, is separated, and this forms the running. At the same time, likewise, that a blister acts on the skin, it stimulates the surrounding absorbents to take up the fluids, and if the blister is strong, they are much excited—these same absorbing vessels remove even the solids likewise. The blister for general use should be composed as follows:—

Blister, No. 1.

Spanish Flies	4 drachms.
Hog's Lard	3 ounces.
Spirits of Turpentine	1 ,,

Blister, No. 2.

Sulphuric Acid	1 drachm.
Common Tar	2 ounces.
Hog's Lard	1 ,,
Cantharides	1 ,,

Mixed together.

The mode of blistering is as follows:—The hair should be cut close as possible from around the part to which the blister is to be applied, and the blistering ointment well rubbed in for 20 minutes, smoothened down, and spread a little more on the surface with a knife.

If the pasterns and fetlocks are the parts to be blistered, it would be well to smear the heels with lard, tallow, or melted suet, to prevent grease or troublesome sores forming on them from the falling of the blistering ointment. The horse should have hay or other food constantly before him, which will divert his attention from the blister, and soothe his pain—his head should be most carefully bandaged for two days and nights, to prevent him biting the blister, or lying down. On the

fourth night he may be permitted to lie down, but even then, the prevention to injure himself should be continued, by means of what is called a cradle, which is put on when the blister becomes troublesome.

If the cradle cannot be got ready made at the shop of a turner, it may be made of 8 or 10 pieces of round wood, an inch and a half in diameter, and two feet long, strung at each end of a rope, and fastened round the horse's neck, whereby he is effectually prevented bending his neck to bite or otherwise injure himself

Sweating Blister.

This technicality is made use of among farriers to imply a moderately active stimulant, generally of a liquid kind that will not excoriate, rise the cuticle, or cause a separation of hair, and yet will rouse the absorbents, and occasion, as is supposed, a transpiration of fluid matter, or a sweating effect whereby accumulations are removed in the latter stages of muscular and ligamentary strains, as those of the shoulder, hip, style, and some others.

Sweating Blister, No. 1.

Liquor Ammonia	1 ounce.
Spirits of Turpentine	1 ,,
Spirits of Camphor	1 ,,
Tincture of Opium	1 ,,
Olive Oil	1 pint.

Mixed together and rubbed in 3 minutes at the time for 3 days.

Blister, No. 2.

Oil of Turpentine	1 ounce.
Vitriolic Acid	2 drachms.
Hog's Lard	4 ounces.
Spanish Flies	1 ,,

Blister, No. 3.

Common Tar	4 ounces.
Vitriolic Acid	2 drachms.
Oil of Origanum	4 ,,
Hog's Lard	2 ounces.
Spanish Flies	2 ,,

Blister No. 4.

Hog's Lard	6 ounces.
Venice Turpentine	4 ,,
Bees' Wax	2 ,,
Yellow Resin	1 ,,
Oil of Origanum	4 drachms.
Powdered Cantharides	3 ounces.

Blister, No. 5.

Best Liquid Blister.

Spirits of Wine	1 ounce.
Spirits of Turpentine	1 ,,
Cantharides	4 drachms.
Train Oil	6 ounces.
Nitric Acid	1 drachm.

Rub it on the part for 5 minutes.

Gelding.

This operation is useful in rendering horses more gentle and tractable, but some contend that the loss of strength and spirit which the animal sustains, more than counterbalance this advantage.

The best mode of performing this operation is to put a switch on the animal's nose, then put on the neck rope and side lines on both hind legs, pull them gently as far to the front as you can, to prevent him kicking, then get a firm hold of the near testicle and make an incision through the centre, press it out, put on the claws, and tear it off with the iron, when this is finished proceed to remove the other in the same manner.

After both are removed, a pledget of fine tow, wetted in one part of oil of turpentine, and four parts of linseed oil, may be introduced just within the edges of the wound.

The third day the parts are to be fomented with very hot water for one hour in the morning, and the same in the evening, at the same time keeping the orifice open, by introducing the finger. I don't agree in opinion with

any person who would advise colts to be gelded before they are two years old. I would also advise every person who knows how to geld a horse, to drop the old cruel fashion of binding the poor animal with ropes and throwing him down, sometimes breaking his back or his neck.

I have reason to believe that I am the first and only person in Europe that does it standing, so far as I know. During an experience of 25 years, I have never read of, heard, or seen, the operation of gelding performed in the horse in a standing posture.

For a long time I have conformed to the common practice of throwing down the horse and thus operating in a recumbent posture, but within the last 4 years I have saved the poor brute this cruel ordeal.

During that time, to the knowledge of my numerous patrons in and around Fermoy, I have extirpated the testicles while the horse was standing, and I cannot recommend too strongly to my professional brethren, the peculiar advantage to be derived therefrom; nor can I conceal from myself the satisfaction which this reformation, and (the originality of which I claim) in this department of veterinary art, has occasioned me

Rowels and Setons.

Rowels in horses are usually made in the following manner:—an incision is made through the skin by means of a sharp scissors, or what appears better, a sharp knife. The finger is then introduced below the skin so as to separate it from the flesh all round, as far as the finger will reach; a piece of leather, about the size of a crown piece, is then inserted between the skin and the muscles, having been first anointed with some stimulating ointment, a small piece of tow or caddice spread with the same ointment, is put over the hole in the centre of the leather, the skin is laid down over all, and the part is covered with a pledget of tow. The leather is left in this situation for three days, during which time the

parts adjoining the rowel swell, and, at the end of that time, there appears a discharge of yellowish matter, which gradually becomes thicker and whiter in three days, at farthest; the part must be examined, and the plug removed from the hole to allow the matter to flow out. The rowel is now complete, and may be continued as long as found necessary. The action of the rowel is easily explained—the leather introduced excites a degree of inflammation between the skin and flesh, and by no means taken to check this, it goes on like most other inflammations of fleshy parts to suppuration; thus a discharge is produced from the part, which is found to have considerable effect in checking inflammation of some more important organ near which the rowel has been inserted.

Setons.

Setons are very useful to drain off matter gradually from large abscesses, or suppurating tumors. It is a piece of cord or tape passed through the base of such ulcers as have deep sinuses between the skin and muscles. This is effected by means of an instrument resembling a needle, and the seton is kept in its place by tying both ends together. The tape should be moved several times during the day, and wetted with turpentine, spirits of wine, or some acrid liquid, in order to keep up the inflammation, and promote the discharge of matter, which is the purpose for which setons are used.

Setons are often useful in increasing a discharge in the places contiguous to inflammation, and thus carrying off that superfluity of fluid matter which would distend the vessels of those parts, and keep up the inflammation; for example—in inflammation of the eye, a seton in the cheek will act with much advantage, on the principle of counter irritation. In deep-seated inflammation, many favourable results have been experienced in the use of the setons; for example—in inflammation of the navicular joint, great advantage has been derived from a

seton. Where there are abscesses, or tumors in the withers or poll, the seton should be passed entirely through from the bottom to the top, by which the fluid will be discharged, and the accumulation of more prevented.

They are especially valuable in deep fistulous sores, by giving an out-let to the matter secreted in them, which, if not discharged, would eat deeper into the parts, and without being thus worn off, the disease would never be extirpated.

Shoeing.

Even without the assistance of history, it would naturally suggest itself, that the ingenuity of mankind would be early employed in discovering some mode of counteracting the effects of pressure, and abrasion on the feet of such horses as they had domesticated, for, as commerce and the liberal arts were encouraged among them, so the necessity of forming more easy communications with each other, by means of paved tracks or roads presented itself, and which, as they occasioned an unnatural wear of the feet, it became necessary to counteract the effects of by some artificial defence. In very early ages, a species of sandals were made use of for horses, as well as men, which were formed either of leather, or of matting, but it appears that these were only in occasional use for horses.

Xenophon, who commanded the cavalry of the Grecian armies, about 500 years before Christ, and who wrote expressly on the subject of horses, mentions such an occasional defence for their feet, in use in his time. In Columella and Varo, who were subsequent writers, we have additional evidence of this. 200 years after these, Apoyrtus, a famous farrier, who lived in the reign of Constantine, gives express directions for the treatment of bruises and galls of the shank, brought on by the thongs or fastenings of the foot shackles. At later periods, these shackles were strengthened by plates of

metal which in general cases were probably of iron; on occasions of great magnificence appear to have been sometimes made of gold, as we are told by Pliny, were those used by mules of Poppaca.

But as riding, and the use of chariots became more general, so some means of obviating the inconveniences of the inapt modes of fastening the defences for the feet then in use, presented themselves more forcibly; yet it is probable, that it was not till about 12 or 13 hundred years ago, that the present method of shoeing with iron plates, and attaching the same by means of nails was practised.

Vegetius, who lived in the reign of Valentinian the third, though he accurately enumerates every thing connected with an army forge, makes no mention of any apparatus for shoeing horses, nor any artificers for that purpose. And from Beckman we learn that the first account of the modern horse shoe that can be relied on, is gathered from an account of the furniture of the Emperor Leo, of Constantinople; but the use of shoes of this kind was very confined at this period, nor did perhaps, any horse continue to wear such altogether, but now and then only.

The art of horse shoeing appears to have been brought into England by William the Conqueror, having been previously sometime practised in Ireland, as the Irish at that time were considered the stars of Europe. Henry de Ferrers, a favorite of William the Conqueror, came over with him as superintendent of horse shoers, and from thence the future Earls of Ferrers, his descendants, always have borne six horse shoes in the quartering of their arms.

But neither in Ireland, nor in England, nor in any of the Continental countries, did the art make a progress at all equal to its importance. It is time that many writings expressly on the subject were produced, and French, German, Italian, and Spanish treaties on shoeing of very old date are to be met with; there are a few

English also, but which are mostly borrowed from the French. Nevertheless, when the celebrated La Fosse began his career, the practice of this art was but clumsily managed, and his well-known writings on this subject, appear to have first paved the way for the improvement that followed.

La Fosse Shoe.

La Fosse considered long heavy shoes as useless, and liable to drag off, that they lessened the animal's points of support, and that thick heel shoes were no assistance to weak heeled hoofs; he was hence led to recommend what he called the half moon shoe, which was short, and reached only to the middle of the foot. This method was considered at the time as very ingenious, and his treatise on the subject was translated into the English language, both by Bracken and Bartlet, who each recommended the plan it taught.

But persons very often who try a new mode, fall into one of three errors. They either enter on it with a prejudiced mind, by which they are previously determined to find out only its defects, or they expect more than can be performed, and hence are disappointed and disgusted, or otherwise they embrace without prejudice the new mode. This shoe, or one something similar to it, was also first adopted by Mr. Colman, but not being found to answer, was very soon abandoned.

But with all its merits and defects, the half moon shoe was not La Fosse's invention, it had been used for contracted feet more than a century before.

The present mode of horse shoeing in France differs very much from ours, as their shoes present no fullering, but the heads of the nails which are square, are received into a countersink; these nails go round the toe, and stand much more within the circumference of the shoe than ours, which leaves a projecting rim beyond the foot. Their shoes are likewise not nailed so near the heels as

the Irish, and the last nail is always the smallest; also, one man holds up the foot, while the other man drives the nails.

Osmer's Shoe.

Mr. Osmer was originally a surgeon, possessed of a strong mind, with great marks of originality—his thoughts on shoeing were offered about 1760. Osmer considered the bars and frog as essential parts, and particularly insisted on the propriety of that soft elastic part remaining uncut, the loose ragged portions only being removed.

He likewise observed, that some persons mistaking La Fosse, (who blamed the improper cutting away the sole and frog) had gone into the contrary extreme, and suffered the feet to grow to a preposterous length. The feet of all horses, he remarks, ought to be pared according to their length. The shoe he recommended was to be made quite flat on the under surface, of an equal thickness throughout its outer margin, and to prevent its pressing on the sole, that is, levelled away not from the edge, but from about half its width, by which means it would leave a flat surface for the attachment of the crust. His further directions were, that every shoe should stand wider at the heel than any other part.

Mr. James Clarke's Shoe.

Not very long after La Fosse and Osmer had awakened the attention of the public to shoeing, Mr. Clarke, of Edinburgh, published his treatise on this subject.

This gentleman's shoe did not materially differ from the one recommended by Osmer, and is used by many of the most intelligent of our farriers, but his remarks more forcibly pointed out the improprieties generally practiced. It is plain likewise that Lord Pembroke borrowed many of his ideas from him. Mr. Clarke's principles rested on recommending no unnecessary paring or cutting, either of the hoof or frog, nor did he allow of raising the heels with calkins, except in hilly countries.

Monsieur St. Bel's Shoe.

In consequence of the situation this gentleman held as professor of the English Veterinary College, every attempt he made at improvement excited the attention of the English, and as Mr. Blaine says, he was certainly not well informed with regard to the general pathology of the animal; yet he possessed many excellent ideas on the mechanical arrangement of the foot, and his principles of shoeing were ingenious. The professor's shoe was intended to present a concave surface to the ground, that would more closely imitate nature, which mode he offered as entirely new, and though it is possible he considered it as such, yet the same form was as strenuously recommended 300 years ago, in a treatise written professedly on the subject by Cæsar Fiaschi, an Italian.

Mr. Morecroft's Shoe.

This ingenius professor of the veterinary art, rendered himself eminent by his invention of casting shoes, or moulding them by means of machinery, which was done by sinking them in dies, but the plan was not found to answer, and the ingenious inventor lost £3,000 by the experiment.

The Patent Artificial Frog.

Mr. Colman, veterinary surgeon, convinced of the necessity of pressure to the frog, when he entered on his labours, invented also an apparatus for this purpose, to be applied in those cases, where, by bad shoeing, or by disease, this part had become elevated from the ground. The patent frogs were, therefore, intended to produce pressure on the natural frogs.

The Patent Expanding Shoe.

Mr. Colman, finding his patent frog neither expanding horses' feet, nor his own pocket, as Mr. Blaine said, invented or rather adopted a shoe, having at the inside of each heel a clip bent down to embrace the bar, by

which it was presumed the tendency in the foot to contract would be mechanically prevented, and to promote a disposition to diverge also—the heels of this shoe are bevelled outwards. When this was first brought forward it was like the frog, to do wonders, and the liberty of forging the shoes was sold to smiths to complete the bargain; the liberty of wearing them ought also to be sold; but this child of adoption appears also doomed to suffer the fate of the former.

Shoeing

Is a matter of so much importance, that it cannot be too clearly explained, or too generally understood, consequently creates no surprise that so many writers have condescended to offer their sentiments upon a subject of such magnitude; but it is to be regretted those opinions have been submitted to public inspection in so remote a way, and applies more to the professional conception of individuals than to the standard of general comprehension.

The various dissertations upon shoeing, or diseases of the feet, have been in general too sublime in their language, and too much interspersed with anatomical disquisitions and technical jargon, to acquire public patronage and commendation; to such inconsistency alone may perhaps be justly attributed their consignment to oblivion so soon after publication. The various animadversions of different writers under this head, are evidently too closely wrapped in the veil of obscurity, and seem purposely addressed much more to the anatomical judgment of the scientific artist, than to the understandings of the many by whom we are to suppose it should be equally understood.

An elegant arrangement of words, and ambiguity of expression, may contribute a loftiness of style more pleasing to the gentleman delighting in a judicious display of polished language; but, in the present instance is required such easy flow of plain descriptive matter, as becomes perfectly applicable to the inferior

capacities proportionably interested in its effects, who have not the least right to be excluded their share of knowledge for the ostentatious introduction of pedantic phraseology.

Such connected chain of useful information, divested of obscure references to remote considerations (that only to erect one mystery upon the basis of another) must certainly prove much more applicable to the intentional purport of common conception and general improvement, than the many labored dissertations, whose titles promise so much, and the learned contents of which communicate so little, to be generally understood.

And here I would enter a protest, not only against the suggestions of the ignorant, which I invariably receive with profound contempt and the pity they merit, but also against those gentlemen enlightened by versatile attainments, who imagine that they can dictate to a skilled operative farrier, the best method of performing the operation of shoeing, because perhaps they have at some time cast a desultory glance over a work on veterinary practice, and given undue consideration to that important department of the science denominated shoeing.

Such suggestions are, in the words of the immortal Shakspeare, "wasteful and ridiculous excess," for it cannot be expected that the uninitiated, no matter how clever in general information, can pretend to that theoretical and practical knowledge which the votaries of that particular department possess.

I would respectfully suggest to my readers to make any fitting observations they like on the way a horse travels, and trespass not on the province of the farrier, because many horses have been ruined from the dogged perseverance with which they seek to have their suggestions carried into execution.

It will be observed by the foregoing, that many professors of the veterinary art, have differed in their opinions as to the horse shoeing system, and the style of

shoe best suited to a horse's foot, but none of these learned men have ever made, or put on horses' shoes—not so with me – I have had many years practical experience in both these important branches of farriery, etc. I have seen many horses that were shod by myself, and under my superintendence, travel the road and perform their work with evident ease, and to the great satisfaction of the owners.

The Concave Shoe

The proper form and construction of which, are matters that require much consideration, as it is important to ascertain the shoe least likely to injure the horse's feet.

The general shoe that I would recommend for horses standing straight in their fetlocks or pasterns is the following:—

The web should be the same thickness throughout, from heel to toe, and sufficiently wide to prevent the sole being bruised—the outer part accurately flat, and designed to support the crust, and that only, for it has been already proved, that by the crust alone, the whole weight of the horse is sustained. It should be fastened to the foot with seven nails, with holes not too large, and great care taken that the nails fit the holes properly, four nails outside and three inside the shoe — those outside extending a little farther towards the heel, the outside heel being thicker and stronger, and a better hold for the nail—the last nail on the inner quarter being farther from the heel on account of the weakness of that quarter.

The inside part of the web should be bevelled, or rendered concave, so as not to press upon the sole; many of our horses, from too early and undue work, have the natural concave flattened, and the disposition to ascend and descend, is thereby increased.

The concave shoe, even in this case, prevents the possibility of injury, because the sole can never descend to the degree in which the shoe is bevelled. A horse

with long pasterns should have the heels of the shoes much thicker behind than before, to support the back sinews, and the toe cut down and shortened as much as possible.

The Bar Shoe.

The bar shoe is a useful contrivance—it is the continuation of the common shoe round the heels, and by means of it, the pressure may be removed from off some tender part of the foot, and thrown on another better able to bear it, or more widely and equally diffused over the whole foot. It is principally resorted to in cases of corns, bad frogs, sand cracks, pumiced feet, thrushes, and weak quarters. In these cases the bar shoe is an excellent contrivance, if only worn for one or two shoeings, or as long as the disease requires it to be worn, but it must be left off as soon as it can be dispensed with.

Tips.

Tips are short shoes, reaching only half round the foot, and worn while the horse is at grass, to prevent the crust being torn by the hardness of the ground, or by the pawing of the animal, and the quarters at the same time being free, the foot disposed to contract, has a chance of expanding, and regaining its natural shape.

The Expanding Shoe.

It is either seated or concave, like the common shoe, with a joint at the toe, by which the natural expansion of the foot is permitted, and the injurious consequence of shoeing prevented. There is, however, this radical defect in the jointed shoe, that the nails occupy the same situation as in the common shoe, and prevent, as do the nails of the common shoe, the gradual expansion of the sides and the quarters, and allow only of a hinge-like motion at the toe. This is a most imperfect accommodation of the expansion of the foot to the action of its internal parts.

Leather Soles.

When the foot is bruised or inflamed the concussion or shock produced by the hard contact of the elastic iron on the ground, gives the animal much pain, and causing a short and feeling step, or even lameness, a strip of leather is placed between the seating of the shoe and the crust, which, from its want of elasticity, deadens, or lessens the vibration or shock, and the horse puts his leg to the ground more freely, and is much relieved.

SECTION IV.

NATURE AND PROPERTIES OF THE BLOOD—NATURE AND PROPERTIES OF THE LUNGS—INFLAMMATION OF THE LUNGS—NATURE AND PROPERTIES OF THE KIDNEYS—INFLAMMATION OF THE KIDNEYS—NATURE AND PROPERTIES OF THE STOMACH—NATURE OF THE HEART—NATURE OF THE LIVER—NATURE OF THE BLADDER—NATURE OF THE PULSE—WHAT IS INFLAMMATION?—DIGESTION—THE ARTERIES—THE NERVES.

Nature and properties of the Blood.

The nature and properties of this fluid belong to hyrology. The blood was in the earliest ages accounted as the greatest consequence in the machine; perhaps the great stress laid upon it in the Bible, might not a little contribute to this, when men were strictly commanded to refrain from blood, because "it was the life;" but it is remarkable, that though the very great importance of this fluid was known to the ancients, and to an alteration of its properties was attributed most of their maladies, yet they had no just conception of its motion through the body. That it had motion they were aware, but they in general conceived it to be like the ebbing and flowing of the sea, and that during sleep this was reversed. Doctor William Harvey, who lived in the year 1628, published his grand discovery of the

blood returning to the heart by the veins, which was before supposed to flow from the heart by them, and having once begun his researches, he did not leave them till he gave us the true route and course of the fluid through the body.

The action of the air on the blood, we have every reason to suppose, that the blood is constantly wasting, for it tends to support the growth of parts; admitting this, it becomes necessary it should have sources of renovation and restoration, which appear to be derived from the lungs and the chylopoetic viscera. By the first it is altered and meriorated, and by the latter it is renovated in point of quantity. The blood seems to acquire from the air a certain part, or possesses itself of certain properties, whereby its qualities are brought back from a venal to an arterial state, which is the only one that seems fit for the purposes of support. When the venal blood is exposed to the action of the air, it soon loses its dark hue, and becomes florid and bright in the part exposed to the atmosphere; and as the other portions are successively exposed, they become in the same manner brilliant.

If venal blood is also placed in a bladder, those parts in contact with the bladder become brightened. If blood in the pulmonary artery is examined, it will be found dark, impure, and venous, when, on the contrary, examined in the pulmonary vein, it will be found bright, florid, and arterial. We likewise observe, that the same changes, as far as regards color, take place in the blood in its passage through the lungs, by means of its exposure to the action of the air in the bronchial tubes or cells. That this arises from the air we know, for if we hang or strangle any animal, and then open each side of the heart, we shall find the blood in both equally black and venous. It is also certain that the change of color is not the only alteration that the blood receives, otherwise it would be a change on the least useful part of the blood; but it is more probable that it is an effect

wrought on the blood in general. Innumerable proofs may be brought forward to prove that some important alteration is effected in this fluid in its passage through the lungs—every experiment, almost every phenomenon of animal life shews it. The difference between the blood in the arteries and veins, and which blood we all know is derived from the same source, is a most strong and convincing proof. The researches of eminent anatomists describe the phenomena of life to be effected by the continual wasting and reproduction of the body, by the several actions of life, as breathing, exercise, etc., and therefore this waste of matter is greatly accelerated by exercise, and consequently reproduced as quickly with new and strengthening properties.

Nature and Properties of the Lungs.

The lungs are the seat of a peculiar circulation, they convey through their comparatively little bulk, the blood and other fluids scarcely transformed into blood, or soon separated from it, which traverse the whole of the frame. They consist of countless ramifications of air tubes and blood vessels connected together by intervening cellular substances.

They form two distinct bodies, the right somewhat larger than the left, and are divided from each other by the duplicature of pleura; each lung has the same structure, properties, and use, each of them being subdivided, the right lung consisting of three lobes, and the left of two. The intention of these divisions is probably to adapt the substance of the lungs to the form of the cavity in which they are placed, and to enable them more perfectly to occupy and fill the chest. If one of these lobes is cut in two, it is found to consist of innumerable irregularly formed compartments, to which anatomists have given the name lobules, or little lobes. They are distinct from each other, and impervious, on close examination. They can be subdivided almost

without end; there is no communication between them, or, if perchance, such communication exists, it constitutes the disease known by the name of broken wind.

Inflammation of the Lungs.

Inflammation of the lungs is sometimes sudden in its attack, but generally preceded by symptoms of fever.

The pulse is occasionally not much increased in frequency, but oppressed and indistinct; the artery is plainly to be felt under the finger, and its usual size, but the pulse no longer indicates the expansion of the vessel, as it yields to the gush of blood and its contraction when the blood has passed, it is rather a vibration or thrill communicated to a fluid already over distending the artery in a few cases, even this almost eludes the most delicate touch, and scarcely any pulsation is to be detected.

Symptoms.—The extremities are cold, the nostril is distended, the head thrust out, and the flanks begin to heave. There is a peculiarity in the working of the flanks; it is not the deep laborious breathing of fever, nor the irregular beating of broken wind, in which the air appears to be drawn in by one effort, while two seem to be necessary to expel it, but it is a quick hurried motion, evidently expressive of pain and of inability to complete the action on account of the pain or of some mechanical obstruction.

The membrane of the nose is of an intensely florid red more vivid in the inside corners of the nostrils, and remaining concentrated there, if at times it should seem to fade away higher up.

The countenance is singularly anxious, and indicative of suffering, and many a mournful look is directed at the flanks; the horse stands in a singular manner, stiff, with his fore-legs abroad, that the chest may be expanded as much as possible, and he is unwilling to move lest for a moment he should lose the assistance of the muscles of the arms and shoulders, in producing that

expansion, and for the same reason, he obstinately stands up day after day, and night after night, or if he lies down from absolute fatigue, it is but for a moment.

Cure.—Immediately on ascertaining that a horse is attacked by an inflammation of the lungs, 5 quarts of blood should be taken at once; a clyster should next be given, composed of 6 ounces epsom salts dissolved in thin gruel, and repeated every fourth hour, after which the following ball must be given:

Barbadoes Aloes	6	drachms.
Tartar Emetic	2	,,
Calomel	1	,,
Digitalis	1	,,
Nitre	3	,,

The horse should be blistered on both sides of the lungs and chest, bran mashes and drinking water, with the chill taken off. He should also be warmly clothed, if the weather be cold. A free circulation of air is also requisite.

The Kidneys.

The Kidneys are two glandular bodies, situated in the superior and posterior part of the abdomen; the right generally the most anterior, and attached to the hinder edge of the liver, lying under the sixteenth rib. The right is usually rather triangular, and both being particularly covered with the peritonium duct in many brutes, as the pig, cow, and sheep; they are embedded in fat, but in the horse, dog, and most fleet animals, there is less fat about them.

From the quantity of blood the kidneys receive, we are led to suppose them very important organs, whose use we know is to seperate from that fluid, some parts whose presence would be deleterious. It is remarkable that many substances taken into the stomach, and absorbed by the lacteals, have their properties or sensible

qualities rendered latent, so long as they remain in the stomach, or in the lacteals, and even in the blood; but as soon as any separation takes place within the kidneys, these substances recover their qualities, hence, cantharides received through this medium, or by the surface of the skin, produces no sensible effect on the blood vessels; but as soon as they have been seperated from it by these organs, they then produce the most sensible effect—inflaming the kidneys, literius, and more particularly the neck of the bladder, producing strangury. Nitre and resin produce diarrhetic effect, neither being active while existing within the blood vessels, but as soon as circulated through the kidneys, they produce a high degree of stimulus to those organs, whereby they seperate much more of the watery parts of the blood than usual. From the great vascularity of the kidneys, they are subject to inflammation, to calculus concretions, and diabetes; and as their office is so important, so under inflammation, the effects produced are as serious and destructive as would occur in other parts of twenty times their magnitude. The most frequent ailment, however, to which they are exposed, is that of being bruised by the action of the lumber muscles, in violent exercise, which bruises produce a lesion of their fine vessels, and hence it is so common for horses who have been hard ridden to make bloody urine.

The Ureters.

The urine having been separated from the blood, and passed into the pelvis of each kidney, is then carried off by means of two muscular tubes, one to each, called the ureter. These canals pass out of the posterior part of each sinew, and are continued backwards, not in a straight direction; being continued towards the bladder, they gradually approach each other, and are crossed upon by the spermatic rope, and finally inserted at some distance from each other within the bladder.

Inflammation of the Kidneys.

Cause.—This disease may arise from the kidneys being injured from an improper use of diarrhetics, or over exertion, in drawing or carrying too great loads, or hard riding, or it may also be occasioned by a fever.

Symptoms.—Weakness of the back and loins—the horse stands with his legs at a considerable distance from each other—the discharge of the urine is either wholly prevented, or in small quantities, and as inflammation increases becomes bloody, and the voiding of it more difficult—the extremities become cold, and cold sweat frequently breaks out—the pulse also is quick, and relaxation of the kidneys will sometimes occur without any inflammation; but this may easily be distinguished from the above, by the urine being of its natural color, whilst the horse remains at rest in the stable; but as soon as he is brought into exercise, the discharge of the urine is accompanied with blood.

Cure.—When it is ascertained that the kidneys are inflamed, four quarts of blood may be taken, and the following ball given:—

Tartar Emetic	2 drachms.
Aloes, Barbadoes	4 ,,
Castile Soap	½ ounce.

The food should consist of hay mashes, or cut grass, and a clyster given every six hours. The loins should be rubbed with the following liniment for 3 or 4 days:—

Tinc. Opi	1 ounce.
Spirits of Camphor	½ ,,
Spirits of Turpentine	½ ,,
Liquor Ammonia	1 ,,
Linseed Oil	1 pint.

Put into a bottle, and shaken well for use.

This liniment should be well rubbed on the parts affected, after they have been fomented with hot flannels,

wrung out with an effusion of marsh mallows; when the disease is perfectly cured, should the season of the year permit, the horse may be put to grass.

Nature and Properties of the Stomach.

The stomach is so important an organ, that the ancients regarded it as the seat of the soul; and its presence by the great physiologist, Mr. Hunter, as the grand distinctive mark between the animal and vegetable life, though we now know, that the existence of a stomach is not an invariable mark of the animal, nor does its absence incontrovertably prove a vegetable origin.

In the horse there is but one stomach, which is very small, proportioned to his general bulk, and is partly membranous, partly cuticular, and partly muscular—with a figure that when distended, has some resemblance to a bag-pipe.

It is situated immediately behind the diaphragon in the left hypochondriam, and in part of the epgastrium, with its expellent orifice extending to the right.

Thus, when the stomach is moderately distended, it lies in an obliquely transverse direction, with its extremities a little forward, and its orifices superior; but the caratic the most so, having the lesser extremity rather posterior to the other, and the great curvature inferior, and perhaps a little posterior. It is evident that its situation must vary much according to its distention. The foregoing description answers to it when moderately filled only; but where it is very much so, the left extremity will press upon the disphragm, and the right will be carried more posteriorly.

From a distended stomach pressing upon the diaphragm, we are at no loss to understand why breathing is impeded after a full meal, or why a horse appears to labor for breadth if quickly moved, for he is forced to use the intercostal muscles, the muscles of the shoulders, and those of the fore extremities to open the chest, its

distention backward being prevented by the pressure of the stomach upon the diaphragm; hence, we see the great impropriety of galloping horses after watering, to warm it in their bellies, as it is foolishly termed, and also how hurtful it is to ride hard immediately after a horse has been full fed.

The inner covering of the stomach is composed of two portions, a cuticular, and a villous.

This species of cuticular, covering rarely to one half of the stomach, is peculiar to such animals as appear destined to live on grain, as horses, asses, rats, and mice; and this forms a third species of stomach between the true membranous, one of graminivorious animals, and the muscular of the carnivorous tribes.

The villous or sensible portion, though it occupies more of the length of the stomach, yet perhaps, in real extent, extends over little more than half its surface; it unites with, or is connected to the cuticular coat. Its external surface is firm, and appears as it were a distinct portion, but is nothing more than the general cullular membrane—here rather more dense, which has given rise to the description of four tunics to the stomach. The vessels of the stomach are three very considerable branches—the two gastrics, and one from the pancreatic, which are ramified over its different portions, forming two considerable arches, one over the small, the other over the great extremities. The blood is returned by similar veins into the vena porta. The nerves are derived from the par vagum, which are the eight pair that arise from the brain, and passing out of the skull—are continued on the outside of the carotids to gain the œsophagus, and proceed with it, uniting with the intercestal to furnish some branches to the thoraic visore, and are then spent upon the stomach. It is probable some particular end is brought about by this peculiar origin of the nerves of the stomach; and it is more than probable, that it is by this means that it proves so greatly an organ of sympathy.

Nature of the Heart.

The heart is placed between a daublin of the pleura, the medeastenum by means of which it is supported in its natural situation, and all dangerous friction between these important organs is avoided; it is also surrounded by a membrane or bay of its own, called the pericardium, whose office is of a similar nature. By means of the heart the blood is circulated through the frame; it is composed of four cavities—two above called auricles, from their supposed resemblance to the ear of a dog—and two below termed ventricles, occupying the substance of the heart; in point of fact there are two hearts, the one on the left side, impelling the blood through the frame, the other on the right side, conveying it through the pulmonary system, but united in the manner in which they are, their junction constitutes their natural strength, and both circulations are carried on at the same time—the first is the arterial circulation. No function can be discharged—life cannot exist without the presence of the arterial blood—the left ventricle that contains it, contracts, and by the power of that contraction, aided by other means, which the limits of this work will not permit me to describe, the blood is driven through the whole arterial circulation, the capillary vessels, and the veins, and returns again to the heart. The right ventricle (the other division of this viscus) is likewise employed in circulating the blood thus conveyed to it, but it is not the same fluid which was contained in the left ventricle—it has gradually lost its vital power; as it has passed along, it has changed from red to black, and from a vital to a poisonous fluid, ere it can convey the principle of nutrition, or give to each organ that impulse, or stimulus, which enables it to discharge its functions, it must be materially changed. When the right ventricle contracts, and the blood is driven into the lungs, it passes over the gossamer membrane, of which the lobules of the lungs have been described as consisting; these lobules being

filled with air, which has descended through the bronchial tubes, in the act of inspiration—this delicate membrane permits some of the principal to permeate it. The oxygen of the atmosphere attracts and combines with a portion of the superabundant carbon of the blood, and the expired air is poisoned with carbonic acid gas—some of the constituents of the blood, attract a portion of the oxygen of the air, and obtain their distinguishing character and properties as arterial blood, and being thus revivified, it passes over the membrane of the lobes, unites into small and larger vessels, and at length pours its full stream of arterial blood into the left auricle, thence to ascend into the ventricle, and to be diffused over the frame.

Nature of the Liver.

The liver is a large mass, situated on the right side, with a smaller portion on the left hypochondrium, with its convex surface adapted to the convexity of the diaphragm, it is of a dark red color, and about two feet and a half in circumference, being thick towards the middle, but thin at the edges, in the horse divided into several portions, forming two large lobes, and several smaller ones, the same is observed in all animals destined for quick motion. The liver is attached to its convex surface to the diaphragm, by productions of the peritonium, and likewise by means of cellular membranes. It is exteriorly covered by the peritonium, and internally within this, there is a considerable layer of cellular tissue that penetrates its substance, and which is furnished with numerous lymphatic vessels accompanying its several portions.

Uses of the Liver.

In most animals, the liver is found more evolved at birth than any other organ, the reason of which appears to be, that it receives more blood than other parts, for,

not only does all the blood of the chylopoetic viscera pass through it, but that from the umbelical vein likewise.

It is impossible not to admire the wisdom displayed in the structure of these various parts, and the contrivances to produce these certain ends

In the fœtal state, the glands and other organs have no specific action to perform, or at least but little more than evolution or growth, hence there is no necessity for blood more pure than is merely wanted for the support, and for this evolution, were the blood more pure, the specific action might commence, and therefore nature exhibits some admirable contrivance purposely to deteriorate it, and to render it less pure, that the various organs might be held only in a state of capacity. The liver also exhibits a wonderful contrivance, that the regulation of the economy shall be complete, and the whole system in the fœtal state evolved. When after birth there is no longer any necessity for these contrivances, but, instead, a necessity even exists for their removal; it is effected by the common consent of parts, and now the liver receives venal blood only, and from which, by the living powers of the part, it is enabled to secrete a fluid, that proves of the utmost importance to the system, being the stimulus whereby the intestines are impelled into motion.

Inflammation of the Bladder.

Cause.—This disease is generally produced by such causes as in any way hinder or impede the free passage of the urine, or the too long forced retention of it under any circumstances.

Symptoms.—In cases of that kind a degree of fever is evident, with frequent inclinations to pass urine, without the means of passing any, or but very little at once, and the animal presents nearly the same appearance as described in the inflammation of the kidneys.

Cure.—Inflammation of the bladder is extremely dangerous, and requires copious bleeding, which must be repeated according to the strength of the animal. Large clysters of warm water may be used with great benefit. The following will be found a very useful drink:

Linseed, bruised ..... half pound.
Boiling water .... two gallons.

to which add, after being boiled,

Gum Arabic..... four ounces

which must be previously dissolved in a quart of boiling water. Mix well together for use, and give a quart of it every four hours.

The following is also very good, to be given twice a day, should the pain and irritation appear to be considerable.

Antimonial Powder..... 2½ scruples
Crude Opi ..... ½ drachm
Camphor ..... 2 drachms

with treacle to make the ball, and a little gruel whilst warm.

The Pulse.

It is known that the contraction of the heart causes a dilatation of the artery, or its diastole; and the cessation of action in the heart, or its distention, produces the contraction of the artery, or its systole; and that these two causes operating alternately, produce the phenomena of circulation.

This momentary increase of capacity in the artery, whereby its diameter is enlarged, is called its pulse; and the more frequent are these dilatations in it, or the less numerous, so is the pulse quicker or slower. From the regularity of the motions of the blood, the pulse is felt in all parts of the body at the same time; and as there

is seldom disease present without an alteration in the arterial system, either accelerating the motion of the blood, or retarding it, so it becomes always a very important matter to ascertain the several states in which the vessels concerned in circulation may be. It is a little remarkable, that though the horse's pulse is very easily and conveniently felt from the branch of the internal maxillary that runs over the posterior jaw, yet, authors who have written, have either omitted it entirely, or have given the most vague directions with regard to it. Mr. Bartlet recommends feeling it by the leg. Mr. Clark speaks of it as most easily felt at the origin of the temporal artery, at the base of the ear; but it is nowhere so conveniently observed as at the part I have described.

The pulse is slower in large animals than in small ones, hence the pulse of a dog is from 80 to 110, according to his size; the pulse of a man is from 65 to 70; but in the horse, as a still larger animal, it is from 40 to 45. In young animals, the weakness of the system, and its irritability, are considerable, hence, they have a much quicker pulse. The cat's pulse is 70 to 80; the human infant's beats more than 100; this gradually lessens to the adult period, when it follows nearly the standard we have noticed. As the heart of a large animal has a longer way to send its blood, and its resistance is consequently increased, so it takes a longer time to accomplish its contraction; and thus there is not only a difference between the different species of animals, but between individuals of the same species, as they vary in size, from which, the smaller the horse, the quicker the pulse.

Many circumstances must be taken into consideration in studying the pulse; a particular irritability of the system occasions a quickened pulsation; fear, likewise, generally occasions a very considerable increase of it, for which reason great caution is necessary not to alarm the animal, or the pulsating vessel will present a wrong indication.

In attending on diseased horses, it is hardly possible for the farrier to pay too much attention to the pulse, or to attach too much importance to its variation, as it becomes a criterion of very considerable certainty, and a guide that seldom leads to error. Every farrier ought to accustom himself to the natural state of the pulse, by frequently feeling different pulses of healthy horses, by which means the variety produced by disease will easily be detected; for an affected pulse does not only consist in its quickness and slowness, but also in its softness and hardness, the difference between either of which, and that of health, can only be learned by attention; thus a pulse may be full or small, it may be quick or slow, it may be hard or soft, or it may be regular or irregular, and to which varieties we may almost refer all the different states of the pulse. A full strong pulse, where the resistance to the pressure of the fingers is very considerable, giving a bounding stroke, and evidently betokening an increase of the diameter of the artery, seldom exists in the horse. Something like it only occurs in spasmodic colic, and a very few other unfrequent affections. The highest inflammatory diseases increase the quickness of the pulse, and that generally in proportion to the extent of the affection. They also produce, in the same proportion, a hardened vibrating stroke, but which is yet without the full bounding feel present in these cases in the human; thus, though the pulse in the horse presents a much more unerring criterion of the state of disease, yet analogy fails in detecting a similarity between the two, and experience alone ought to direct the judgment. A small pulse represents in all cases great debility. A quick pulse denotes considerable irritability in the system. A hard or soft pulse present contrary indications. In most inflammatory affections there is present a considerable degree of this peculiar vibratory hardness in the pulse, generally accompanied by an increased frequency also. This vibratory hardness is the usual attendant on

inflammation of vital organs. A regular pulse is sometimes found under very diseased affections, but it is usually increased in its fullness or smallness, or in its hardness or softness. A regular pulse, with a proportionate fullness, is one of the strongest marks of health. An irregular pulse in fever shews great danger; it usually accompanies mortification and gangrane, and when inflammation of the lungs terminates in this way, it is usually present.

Inflammation.

I think it very necessary to give my readers an idea of the meaning of the word "Inflammation," as it often comes in question.

It was supposed by the celebrated Boerhave, and other physiologists of his time, that inflammation depended on a vicidity of the blood, which renders it unfit for circulation in the finer vessels, and hence arose obstructions, and those appearances by which the disease is characterized. This opinion, however, has obtained very little credit with modern physiologists, and is now universally rejected, it having been proved, that blood drawn from an animal laboring under inflammation is more fluid, and remains fluid longer than that which is taken from the same animal when in health.

The most prevailing opinion at present respecting inflammation is, I believe, that it consists in an increased action of the heart, and arteries in general, whereby the blood circulates with unusual velocity through the whole system into derangement and when local, or existing in a particular part, the increased action is in like manner confined to the vessels of that part.

When a part is inflamed, there arises in it an unusual degree of heat, generally attended with considerable swelling. The sensibility and irritability are always increased, and produced by it, in the parts where it did not before exist. In bones and tendons, for example, scarcely any sensibility can be perceived, when they are

in a state of health, but when inflamed, it is roused to an alarming degree, and the most dangerous consequences may insue from it. Inflammation has four modes of termination—the first is termed resolution, that is when the disease, after going a certain length, gradually disappears again—the second suppuration, that is, when matter is formed, or an abscess produced—the third is named effusion, which implies an extravasation either of blood, coagulated, lymph, or serum—and the fourth, gangrane or mortification, by which is meant the death of the inflamed part.

Inflammation of the external parts is generally occasioned by some mechanical injury, such as wounds, bruises, etc.; sometimes however, it arises from external inflammation, or symptomatic fever, and is then to be considered as an effort of nature to cure the internal disease.

Thus we find in fevers, abscesses taking place on the surface of the body, whereby the fever is considerably diminished, and in general terminates favorably.

Inflammation is often produced by plethora or redundancy of blood in the body, in which case it is sometimes general, the whole arterial system having its action increased; this also may be considered as an effort of nature to get rid of the superfluous blood, and in such cases, she must be assisted by copious bleeding. The only favorable termination to which internal inflammation can be brought, is resolution, and the most vigorous measures should be adopted in order to effect it. The most important remedy in these cases is copious bleeding, and the earlier it is employed, the more effectual will it prove. The next remedy is external inflammation, artificially executed by means of rowels and blisters; the fever powder, and occasional clysters are of considerable service.

Local inflammation is characterized by redness, swelling, heat, and pain. The redness proceeds from the greater quantity of blood flowing through the heart,

occasioned by the increased action of the vessels. The swelling arises from the same cause, and from the same deposit of fluid in the neighbouring substance. The natural heat of the body is produced by the gradual change which takes place in the blood, in passing from an arterial to a venous state.

If more blood is driven through the capillaries of an inflamed part, and in which this change is effected, more heat will necessarily be produced there, and the pain is easily accounted for by the distention and pressure which must be produced, and the participation of the nerves in the disturbance of the surrounding parts.

If inflammation consists of an increased flow of blood to, and through the part, the ready way to abate it is to lessen the quantity of blood—if one take away the fuel, the fire will go out.

All other means are comparatively unimportant, contrasted with bleeding. Blood is generally extracted from the jugular vein, and so the general quantity may be lessened; but if it can be taken from the neighbourhood of the diseased part, it will be productive of tenfold benefit; one quart of blood abstracted from the foot in acute founder, by unloading the vessels of the inflamed part, and enabling them to contract, and in that contraction, to acquire tone and power to resist future distention, will do more good than 5 quarts taken from the general circulation.

An ounce of blood obtained by scarifying the swelled vessels of the inflamed eye, will give as much relief to that organ, as a copious bleeding from the jugular vein. It is a principal in the animal frame, which should never be lost sight of by the veterinary surgeon, that if by bleeding the process of inflammation can once be checked—if it can be suspended but for a little while, although it may return, it is never with the same degree of violence, and in many cases it is got rid of entirely. Hence, the necessity of bleeding early, and bleeding largely, in inflammation of the lungs, or of the bowels,

or of the brain, or of any important organ. Many horses are lost for want or insufficiency of bleeding, but I never knew one materially injured by the most copious extraction of blood in the early stage of acute inflammation.

The horse will bear (and with advantage) the loss of an almost incredible quantity of blood; four quarts taken from him, will be equal to one pound from the human being.

Digestion.

Digestion is one of the most important processes that goes on in the body, and is that wonderful power whereby substances received into it lose their own properties, and become endowed with those belonging to the constitution in which the assimilation is carried on; that this takes place within the stomach was always allowed, but in what manner was till lately a matter of much debate—heart putrefaction, friction, and fermentation have successively been considered as the principal agents in digestion—but Mr. Hunter first accurately described the process of solution, by the agency of the gastric fluid, and which theory the experiments of the Abbi Spallanzani and Reaumer have contributed to strengthen. It is now, therefore, universally considered that digestion is a process of solution, and is effected by means of a fluid secreted within the stomach, called gastric juice. The various actions of an animal body produce a waste of the fluids, and even of the solids, and something like a want of tone in the moving powers—these are indicated by the sensations of fatigue and hunger. To restore the tone of parts, rest is required, and to repair the waste, food becomes necessary; as an incitement to the taking in food at proper intervals, the horse is subjected to a sensation called hunger—hunger does not arise from the attrition of the sides of the stomach against each other, nor does it arise from the action of the gastric juice upon the stomach, but it appears to be brought on by the stomach sympathizing

with the wants of the constitution, and hence it is that food taken in invigorates before it can be digested, and hence the propriety of giving but little food, and that frequently, when we travel quick, that we may not overrate the power of the stomach, and which caution is more particularly requisite in weak-constitutioned horses. That this sympathy between the stomach and the body is great, we know by the prostration of strength that is felt on an empty stomach, and which cannot arise from inanition only, but from sympathy also; for, let a tried horse hear the hounds, and he will go on through a long chase with alacrity, but when the melody of the dogs is over, the attention is no longer engaged, and the sympathy returns. It is not improbable that a sufficient degree of tenison in the stomach is necessary to give it its proper energy, and without which it becomes painful, hence, water in which there is little nutriment will give tone by distention, and prevent for a time the sensation of hunger; stimulated, therefore, by this sensation, animals are induced to take in such particular food as their organs are equal to the assimilation of, and to which they are directed both by instinct and by taste.

The carnivorous tribes are prone to take in flesh by their love of it, and they have organs capable for the assimilation of it—the horse has a disposition to take in grain, for he has a mechanism calculated thereto—the ass, the rat, and the mouse likewise. The gastric juice is the powerful solvent by which this assimilation is effected, but it appears not to possess any sensible chemical qualities.

We have, therefore, every reason to suppose that no chemical agency effects this process, but that it is truly a living one. Though the powers of this juice are great, yet life has a particular power to resist its action, hence bots, and other worms are not, while living within the stomach, digested, but when dead, they become dissolved like matter. A horse, as an animal destined for great exertions, needs great support, hence he eats very

largely, and yet as his speed renders it necessary that this viscera should be compact, so some peculiarity, either in form or economy, might be expected, and which speciality consists in having the food taken in, but very slightly digested in the stomach; but this process began here, is further carried on, and completed in the intestines. In the horse, the stomach is not such a general organ of sympathy as in man, and some other animals. In the human, on the contrary, it sympathizes largely with the constitution—in illness, it seldom feels hunger in us, and in most diseases it is nauseated; the mind influences it likewise—the effect of bad news, unpleasant sights, etc., on the stomach, are universally known, and every day met with. In the horse, this is by no means so evident, nevertheless, there are some sympathetic effects observed between this organ and the constitution, it has the sympathy of hunger in common with other animals—in illness, the appetite is lost, though usually not in so great a degree as in the human. Instances of sympathy exist in mares, when under the effects of œstrum, *i.e.*, when they are horseing, they will seldom eat well.

The stomach has also a diseased sympathy, for sick horses will often eat, and die with the food in their mouths.

The Arteries.

The vessels of the body are divided into arteries, veins, and absorbents, and except the hair, hoofs, and epidermis, there is, perhaps, no part of the body without them.

The arteries are canals, whose origin is either from the aorta or pulmonary arteries, which are the only two original arterial trunks in the body; considered generally, they are long membraneous canals, which gradually become smaller as they proceed from the heart towards the extremities. They appear to have three coats, and it is not improbable that the existence of these in

various proportions, occasions some considerable phenomena in health and disease; their elastic power appears in different proportions, in different horses, as in different men, from which arises phenomena in the different constitutions of individuals of each species, giving some a greater disposition to inflammation, which is called a sanguineous temperament.

Our knowledge of the termination of these vessels is very confined; we can readily see they frequently terminate by anastamosis, or the uniting of one branch into another, whereby the blood has its course in some measure altered. We know also, that they terminate in veins, because we can empty the arteries by drawing the blood from the venal trunks, and because injections forced into the arteries in many instances, enter the veins, they likewise terminate on secreting surfaces, in which the contents of the artery become changed, and the part of the blood having undergone fresh combinations, is poured forth in a new form, and the remainder returned by the venal branches.

From various circumstances we are aware, that the arteries in the living animal are always full; we see it by the microscope, and we know that the new column of blood can be but small, in proportion to the contents of the whole arteries; yet it is sufficient to dilate them, and to cause their consequent reaction. As the velocity of the motions of the blood in some measure decreases, as the distance becomes greater from the heart, from the anterior wave moving slower than the posterior; and, as the force of the heart decreases, and that of the arteries strengthens, the further they are removed from it, so at least the column is pressed on by one regular force; thus in every artery they are divided—there is a regular stream with scarcely any jet; this however, only takes place in the minutest arteries. We thus see why there is no pulsation in the veins—they receive the blood from the arteries in one equable stream and continue it by the last impulsive force of the heart, and the new one of the arteries.

The Nerves.

The nerves are white masses sent off from the brain, some of which proceed out of holes in the cranium from that viscus itself; others arise from a large mass called the spinal marrow, which extends down the vertebral canal, and gives off trunks through the vertebral holes.

The nerves in themselves appear long whitish cords, whose internal structure is fibrous, and those fibrillae are distributed to every part of the body. It is supposed that the brain is the seat of sensation, and that the nerves are only messengers of it to all the parts.

The sensibility of a part is usually proportioned to the quantity and size of the nerves it possesses; it is evident therefore, they must exist in far greater plenty in some parts than in others.

Nervous influence is the occasion of another very important phenomenon, which is that of motion, not only the sensation of a part, but its mobility also, is lost upon dividing the nerves going to it. The mobility of parts brought about by nervous influence, is in some measure dependant on the will, and in others it is independent of it. In the one instance it is termed voluntary motion, and in the other involuntary motion.

Nerves are capable of reunion after they have been divided, that is, a substance is interposed between, possessed of the power of carrying on nervous influence. We have no reason to suppose there are any of those diseases termed nervous in the horse; the only active disease we know the nerves of the horse are subject to, is locked jaw, which seems an increase of the action of the brain, or of that action which communicates nervous energy to the muscular fibre—hence pressure on the brain has been found for a short time to relieve it.

The medullary portion is connected with the nervous system; the nerves are a prolongation of it, and are concerned in the discharge of all the offices of life—they

give motion and energy to the limbs, the heart, the lungs, the stomach, and every part connected with life. They are the medium through which sensation is conveyed, and they supply the mind with the material to think and work upon.

PART SECOND.

DISEASES OF THE HORSE.

PART SECOND.

DISEASES OF THE HORSE.

CLASS I.

TOOTH ACHE — SURFEIT — MANGE — WARBLES, SIT-FASTS, AND SADDLE GALLS — MALLENDERS AND SALLENDERS — WENS — FISTULA IN THE WITHERS — POLL EVIL.

The Tooth Ache.

When the enamel of the tooth is worn, and the internal pulpy substance exposed, tooth ache invariably results—the grinders chiefly are affected with the canker. It might be caused by a rusty bridle, and may be easily recognised by the small black blotches or brown specks which appear on the tongue, and other parts of the mouth.

The following gargle or application may be used :—

Armenian Bole	½ ounce.
Burnt Alum	1 ounce.
Common Salt	1 ounce.
Wine Vinegar	½ pint.

Mix in a mortar and bottled. To be well shaken before using, which is done in the following manner :—

Get a piece of whalebone, half a yard long, tie a bit of tow on one end of it, then dip it into the bottle, and

pass it up into his mouth, and let it run gently over all the affected parts—let him champ it well about his mouth, and keep him fasting for about an hour afterwards, at the end of which time the following powder may be rubbed in with the finger, the mouth being kept open with a balling iron. I may remark that I have never known this to fail in the course of my experience.

Prepared Chalk.....	½ pound.
Burnt Alum	¼ pound.
Powdered Myrrh	½ ounce.
Camphor, in powder	¼ ounce.
Cuttle Fish Bone, powdered ...	½ ounce.
Onis Powder	1 ounce.

Mix.

Surfeit.

This disease arises from immoderate or excessive feeding, and a depraved quality, or unwholesomeness of food; it consists in an obstruction of the pores of the skin, and inflammation of the surrounding parts, whether from an original affection of the skin, or sympathy with digestive organs.

The surfeit assumes various forms in different subjects. In some it is manifested by dry scales all over the body and limbs—in others, by small knots and lumps—in more by moisture, accompanied by an exalted temperature of the part, and inflammation.

The humours are so acrid and irritating, that the animal suffers from a most violent itching, and sometimes rubs himself raw—others have no apparent eruption, but are lame and hide bound.

Treatment.—A slight eruption may be removed by bleeding and diuretic balls, but I have greater faith in the administration of purgatives. The following is a summary of my treatment, which my extensive experience, and its invariable success, fully justify me in adopting.

I give bran mashes for three days, with a scruple of Calomel in each; I then administer the following ball.

Barbadoes Aloes	6 drachms.
Calomel	1 ,,
Ginger	2 ,,
Castile Soap	a sufficiency to make a Ball.

When the operation of the purgation is over, I give one of the following balls for a week—

Tartar Emetic	5 drachms.
Asafœtida	5 ,,
Nitre, finely powdered	4 ,,

To be made into six balls, with a sufficiency of castile soap. One to be given every night.

The following alterative may be given simultaneously with the above—

White Resin, powdered	6 ounces.
Sublimed Sulphur	6 ,,
Antimony and Nitre, of each	3 ,,
Calomel	3 drachms.

Mix together, and divide into 12 equal parts—one part to be given every morning in a bran mash. During the time the horse is under treatment, give him nothing but bran mashes; he should be kept warmly clothed, and gently exercised for an hour morning and evening.

In that kind of surfeit, which is characterised by a moist discharge from the skin, the parts affected may be bathed with the following lotion:—

Corrosive Sublimate	2 drachms.
Muriate of Ammonia	4 ,,
Cold Boiled Water	1 quart.

Mix, and apply after washing the parts first with soap and water.

Surfeits is very often the precursor of mange, and degenerates into it.

Perseverance, therefore, in the above treatment, is required, as the alternate appearance and disappearance of the lumps, by causing confusion, puzzle inexperienced men, and induce them to modify, if not altogether suspend the use of those potent remedies which I have detailed in the foregoing page. This hesitation is the most fertile service of the degeneration of the lumps into the next disease, which I shall now proceed to discuss.

The Mange.

This disease generally arises from the combined effects of want of cleanliness, poverty of food, a depraved quality, or excess in quantity.

There is generally an obstruction of the cutaneous pores, and a partial suppression of perspiration—a lump comes on, or more frequently an eruption of pimples from which an acrid fluid oozes; the hair and cutile fall off, leaving a scruffy scab. Considerable pain and itching accompany their development at this stage of the disease. The skin is thickened and thrown into wrinkles or folds. The parts most generally affected are near the ears, roots of the mane, back loins, tail, and the back of the hock.

The perpetual itching causes the horse to be continually biting, and rubbing himself against every rough object he meets with. This annoyance preludes the possibility of rest and quietness—the poor animal does not take his food well—he becomes atrophised, that is, he loses flesh.

This disease is highly contagious. The slightest contact appears to suffice for the propagation of this loathsome complaint—if the same brush or curry-comb be used on all the horses, the propagation of mange is the result. Let my readers bear this in mind.

Treatment.—The treatment must be adapted to the condition of the subject—my experience justifies me in ascribing this disease to a two-fold origin, with each of which a want of cleanliness goes hand-in-hand. This two-fold origin is, too high feeding, immoderate and excessive in quantity, on the one hand—or starvation or deficiency in quantity, and unwholesomeness in quality on the other.

Over-fed horses must be purged, and sometimes bled, to diminish the quantity of the circulating fluid—starved horses must get good wholesome, nourishing food; greater regard being had for its quality than its quantity.

In the case of poorly fed horses, the abstraction of blood only aggravates the disease, and must be carefully avoided. Keep the horses in bran mashes, and give in each mash a powder of the following description, for six consecutive days.

Black Antimony	3	drachms.
Sulphur	4	,,
Nitre	2	,,
Tartar Emetic	½	,,

Mix to make one dose.

As in the treatment of the disease termed surfeit, the horse must be warmly clothed, and have gentle trotting exercise for four days in succession, to be continued until a copious perspiration breaks forth, let him then rest for half an hour, when he may be rubbed with a dry cloth, when quite dry rub in the following ointment:—

Strong Mercurial Ointment	1	ounce.
Sulphur	1	pound.
Spirits of Turpentine	½	pint.
Tobacco Water	1	,,

Mixed well together, and rubbed on three days in succession; three days after the last application, wash the

horse all over with soap and water, and repeat the rubbing of the ointment, and ablution of soap and water alternately until a cure is effected.

I have never, in the course of my extensive experience, known the above treatment to fail. I therefore regard it in the light of a specific for the most obstinate and inveterate forms of mange. The stall and manger should be well washed with quick lime, the walls whitewashed, the stable regularly cleaned out, and a clean, fresh litter kept under the horse.

Ventilation should be also looked to, and a concentrated solution of chloride of lime freely sprinkled, which has the effect of chemically decomposing the foul emanations of the stable. I cannot too strongly impress on my readers the absolute necessity of cleanliness, and the unsparing use of chloride of lime after every symptom of the disease disappears.

The horses clothing too may be brushed with solution of chloride of lime, for it is a most potent disinfection.

Warbles, Sit-fasts, and Saddle Galls.

On other parts of the back, tumors and very troublesome ulcers may be produced by the same cause. The little tumors resulting from the pressure of the saddle are called warbles, and when they ulcerate, they frequently become sit-fasts. The ulcer has a portion of callous skin in the centre of it resembling leather in its appearance, and so closely adhering, as not to be separated without great force or dissection, and hence the name given to this peculiar ulcer.

Warbles are too often but little regarded; they will frequently disappear without medical treatment, but they will at other times degenerate into sit-fasts. The horse should have rest at all events. The stuffing of the saddle should be so contrived, that every degree of pressure be removed from the part—then a little sugar of lead and vinegar should be frequently applied, for the

purpose of dispelling the enlargement; should this prove ineffective, let it by no means be torn out, but apply tincture of arnica—one ounce to a half pint of rain water, and put on the part several times during the day, and if all fails a blister must be applied.

For saddle galls, there is no better application than strong salt and water, mixed with tincture of myrrh and arnica.

Mallenders and Sallenders.

In the inside of the hock, or a little below it, as well as at the bend of the knee, there is sometimes a scurfy eruption called mallenders in the fore-leg, and sallenders in the hind-leg. They seldom produce lameness, but if no means are taken to get rid of them, a discharge proceeds from them, which it is afterwards difficult to stop. A diuretic ball should be occasionally given, and an ointment composed of one quart of sugar of lead, two of tar, one of mercurial ointment, and six of lard rubbed over that part; the cause of the complaint is in general owing to bad stable management. Give a dose of physic of the following:—

Barbadoes Aloes ..... 5 drachms.
Oil of Caraways .....10 drops.

Wens.

Causes.—These tumors are sometimes spontaneous productions, when apparent on both heels and elbows; when isolated to either, they generally arise from accidents.

Symptoms.—They present themselves in the form of small fleshy growths from various parts of the body. They are seldom painful—do not often cause lameness, and constitute only a triffling deformity. Those swellings which are visible on the top of the hock, and point of the elbow, are classed among wens.

Treatment.—Mr. Gibson, an eminent farrier, in treating of this subject, says, when wens are pendulous, and

hang by a small root, the best way to extirpate them is, by tying them with a pack thread, or hair line, and gradually tightening the ligature when the fungous growth falls off. A common digestive ointment is then applied to heal it.

Now, while I concede that Mr. Gibson's treatment is successful in many cases, I must candidly confess, that it has the disadvantage of being a slow coach. The rationale of his treatment is certainly ingenious; it consists in cutting off the due supply of the blood, and thus causing mortification, and death of the fungous excrescence.

I invariably extirpate them by the knife, and subsequently dress them with digestive ointment, and should fungous granulations arise, they may be sprinkled with red precipitate and burnt alum.

Bran mashes and a gentle dose of physic should accompany this treatment.

Fistula in the Withers.

Causes.—Blows, contusions, friction, and pressure of the harness and saddle, diseases of the bone, and the ordinary causes of inflammation will produce fistula.

Symptoms.—It usually occurs at the top of the withers—it is small at first, but quickly enlarges, and spreads over one or both sides.

When suppuration occurs, the discharge is prevalent, and is conveyed through the medium of small channels or pipes through the areblar tiasul, (known in old works as cellular membrane.)

Treatment.—When unskilfully treated, fistulas degenerate into extensive and obstinate ulcers.

The necessary prelude to treatment is to ascertain the duration, nature, extent, and direction of the fistula

This diagnosis is a "*sine qua non*" of the treatment; proceed then to make a deep incision (taking care not to wound any considerable vessels or nerves). This is a necessary prelude to the obliteration of the fistula. It

invariably favors the escape of the acrimonious matter. Endeavour then to restore the diseased part to healthy action, by means of mild caustic application.

The following lotion, applied with a pledget of toe, will be most serviceable:—

Corrosive Sublimate ..... 1 drachm.
Spirits of Wine (rectified)..... 2 ounces.
Dissolve.

When the surface appears healthy, all that need be done is to keep it washed with water.

Should a luxuriant crop of granulations present itself, sprinkle them with verdigris, or the following application may be substituted —

Oxymuriate of Mercury..... 1½ drachm.
Sulphate of Copper ..... 1 ,,

reduce to a fine powder, and dissolve in 3 ounces of spirits of wine. To be applied according as required.

Poll Evil.

From the horse rubbing, and sometimes striking his poll against the lower edge of the manger, or hanging back in the stall, and bruising the part with the halter, or from the frequent and painful stitching of the ligaments and muscles by unnecessary tight reigning, and occasionally, we fear, from a blow in the poll, carelessly or wantonly inflicted, inflammation comes on, and a swelling appears, hot, tender, and painful.

The first thing to be attempted is to abate the inflammation by bleeding, physic, and application of cold lotions to the part; by these means the tumor will sometimes be dispersed; this system, however, must not be pursued too far. If the swelling increase, and the heat and tenderness likewise increase, matter will form in the tumor. As soon as matter is formed, which may

be known by the softness of the part, and before it has time to spread around, and eat into the neighbouring parts, it should be opened, and now comes the whole art of heating poll evil; the opening into the tumor must be so contrived, that all the matter shall run out, and continue afterwards to run out as it is formed and collects at the bottom of the ulcer, irritating and corroding it. This can be effected by a seton alone. The needle should enter at the top of the tumor, penetrate through its bottom, and be brought out at the side of the neck, a little below the abscess. Nothing more is required, except fomentation with warm water to keep the part clean, and to obviate inflammation. If the ulcer has deepened, and spread, and threatens to eat into the ligaments of the joints of the neck, apply the following lotion by injecting it into the part:—

Sulphuric Acid.....	1 drachm.
Alum.....	1 ounce.
Water	1 pint,

to be injected several times every day, in order to bring it to a healthy state, and dispose it to fill.

CLASS II.

COUGH — CATARRH, OR COMMON COLD — ROARING — WHEEZING — PIPING — BROKEN WIND.

Cough.

The irritability of so great a portion of the air passage, occasioned by previous and violent inflammation of them, is a most frequent cause of cough — it is sometimes connected with worms. There is much sympathy between the lungs and the intestines, and the one readily participates in the irritation produced in the other.

Notwithstanding the clearness of the cause, the cure is not so evident. If a harsh hollow cough is accompanied by a staring coat, and the appearance of worms, a few worm balls may expel these parasites, and remove the irritation of the intestinal canal. If it proceeds from irritability of the air passages, which will be discovered by the horse coughing after drinking, or when he first goes out of the stable in the morning, or by his occasionally snorting out thick mucus from the nose, medicines may be given, and sometimes with advantage, to diminish irritation generally. A small powder given in a bran mash composed as follows, every night for 9 days, will have a beneficial effect:—

Nitre	3 drachms.
Tartar Emetic	1 ,,

and a cough ball every morning, made with the following:

Opi, Crude	1 drachm.
Garlic	2 ,,
Gum	2 ,,
Tartar Emetic	1 ,,

Made up with Tar.

The above ball to be given the first thing in the morning, a bran mash one hour afterwards, half an hour gentle trotting, exercise at twelve o'clock, weather permitting; hay, five pounds per day; walking exercise morning and evening, for half an hour at the time, and the animal to be well clothed; also, take four quarts of blood away, and blister the glands; when chronic cough occurs after eating, the seat of the disease is evidently in the substance of the lungs. The stomach distended with food presses upon the diaphragm, and the diaphragm upon the lungs, and the lungs already labouring under some congestion, are less capable of transmitting the air; in the violent effort to discharge their functions, irritation is produced, and the act of coughing is the consequence of that irritation.

Thick wind, and chronic cough, may be sometimes cured, and, as they are apt to end in broken wind, which is never cured, so our endeavours should be actively turned towards removing them. In horses naturally gross, living high without much exercise, and feeding foully, our attempts must be directed to lower their general fullness of habit by bleeding, exercise, and moderate feeding; if at grass, a less luxuriant pasture should be chosen; many a horse becomes broken-winded from gorging himself with too much grass; while on the contrary, another who is much affected in his wind in the stable, becomes much relieved when out upon a short bite or pasture not luxuriant. In the stable such a horse should be muzzled at night, to prevent him eating his litter, and his water should be given in small quantities only; all sudden exertions likewise should be as much as possible avoided.

Catarrh or Common Cold.

The sudden transition from heat to cold to which horses are so frequently, and often so thoughtlessly exposed, renders this a very common complaint with them. A simple cold, if neglected, may end in an incurable disease, especially with horses of a delicate constitution.

Catarrh commences with a slight degree of fever, with some little discharge from the nose and eyes, accompanied by cough, which is sometimes hard and painful to the horse—when this is the case, bleeding will be necessary; but if the cough is not severe, the complaint may be generally removed by simple treatment.

The horse should be kept warm, and six balls of the following medicine administered every morning fasting—

Digitalis	½	drachm.
Nitre	2	,,
Tartar Emetic	1	,,

Made into a ball with Tar.

Food should consist of bran mashes, and walking exercise morning and evening.

Roaring.

Which is a remnant of improperly treated catarrh. The following drench will be found of great benefit, when a cough accompanies this complaint :—

Linseed	1 pound.
Treacle	8 ounces.
Vinegar	1 pint.

Let the linseed be put into six pints of hot water, and allowed to stand by the side of the fire until it has fairly taken the substance out of the seeds, then let it be strained, and the other ingredients mixed with it ; give the horse half-a-pint of this six times during the course of the twenty-four hours.

Wheezing.

This stage of the disorder is known by a wheezing sound, being heard like that of the human being affected with asthma. It has its seat in the membraneous lining of the wind pipe low down, where it separates into two branches to convey the air to both lobes of the lungs—there a mucus fluid lodges in the passages. Some old horses wheeze only after feeding and when lying down ; but horses that are confirmed wheezers can be heard at all times ; wheezers should not have much hay, but enough of corn which should be given frequently, as well as water. The windpipe should be blistered, and give the following ball twice a week :—

Turpentine	½ ounce.
Ginger	1 drachm.
Linseed Meal.....	4 ,,

Some persons consider the following better:—

Powdered Resin	4	drachms.
Ginger	½	,,
Linseed Meal	2	,,

Made into a ball with palm oil.

When attended with any degree of fever, the following should be given twice a day, instead of the above:—

Digitalis	1	drachm.
Nitre	3	,,
Tartar Emetic	1½	,,

Piping.

The seat of the disease in this stage, is higher up than the former, and consists in a strict contraction of the windpipe, which considerably diminishes its width. The sound produced in consequence, is a sort of shrill wheezing, nearly like a whistle. Blisters have sometimes been found to alleviate this disease, but a complete cure is quite hopeless.

Broken Wind.

Causes.—All diseases in the lungs proceed from inflammation in a greater or less degree, which, when violent, if not speedily relieved, end in death; however, should this be avoided, it generally lays the foundation for a chronic cough, or broken wind.

Symptoms.—This disease is indicated by the breathing of the horse, altering from its natural state, and from an easy, gentle, and uniform respiration, to a painful laborious heaving, and a violent agitation of the flanks. On examination of the lungs of broken-winded horses, there is sometimes not much difference to be observed between them and healthy ones, but there is always some emphysematous appearance; commonly it is considerable, and much air is diffused throughout the

parenchymatous substance of the lungs; sometimes there are little versicular appearances over the outer surface. That air is diffused within the substance, and not wholly pressed out by the last expiration, is further proved by the circumstance of the lungs not collapsing, when the cavity of the chest is opened; when air, therefore, is inspired in the broken wind, it finds no difficulty of entrance, but being diffused and entangled among the cellular tissue, it finds a difficulty in being expired, and this makes the expiration much longer than the inspiration, and the horse is seen to do it at two efforts; by the first he appears to empty the air from the cells themselves, and by the second more forcible contraction, which is operated by means of the abdominal muscles, the lungs are pressed on, to endeavour to force out the extravasated air from the cellular members.

Treatment.—Attempts at cure have always failed, for the air cells cannot be again made whole. Our endeavours, therefore, can only be directed to mitigate the symptoms.

The first care will be to prevent over repletion of the stomach, for this, in every case, will greatly aggravate the difficulty of breathing—the second is, to avoid overdistention of the lungs, by too violent and too sudden exercise. By carefully attending to these two principal indications, a broken-winded horse may be rendered comfortable to himself, and useful to his master.

To fulfil the first indication, the food should be regularly given in moderate quantities only; but most particularly, it should be such as contain much nutriment in a small space—hence, corn is more proper than hay, and above all, I have found food composed of one part carrots and two parts oats, agree particularly well; on a sufficient quantity of this food, a horse will need but very little hay; water should be sparingly given, and without this caution, all the others are useless. I would also recommend the following ball to be given twice a week.

Opium Crude	½	drachm.
Garlic	3	,,
Gum	2	,,
Calomel	1	,,
Aloes	2	,,

The animal should never get more than four quarts of water to drink at the time, except at night, when he may have six quarts.

CLASS III.

DISTEMPER — STRANGLES — MEGRIMS — PALSY — STAGGERS, OR APOPLEXY — EPILEPSY — WORMS.

The Distemper.

The distemper is generally prevalent in the spring of the year, and is produced by the cold easterly winds upon animals which are usually at this period shedding their winter coats, and consequently less provided against its effects. The horses confined in hot stables are most subject to it.

Symptoms.—This disorder is attended with some degree of fever, frequently accompanied with soreness of the throat. It is also occasionally attended by a discharge from the nose; but it varies much in its symptoms, and is found most prevalent among young horses—it is infectious and epidemical

Cure.—This disorder is very rarely fatal if judiciously treated; but many valuable horses have been destroyed by administering cordials, which are highly injurious. As soon as the symptoms of the distemper appear, the horse should be bled, the bowels opened, and the glands blistered; walking exercise, and warm clothing are also necessary.

Strangles.

It is very strange, how very contrary the opinions of almost all writers on this subject have been, and how lamentably ignorant appear their descriptions of it. Mr. Prosser wrote a treatise professedly on the strangles and fevers of horses, in which he introduces some very good critiques on other writers, yet left both subjects entirely where he found them. Mr. Gibson supposed the complaint resembled small pox, etc. Mr. Bracken, the quinsy; others, the hooping cough, measles, chicken pox, etc. All which suppositions originated in a want of attention to the animal economy in general, and to the disease in particular, for it bears no resemblance to either of these, but in a specific fever of horses, accompanied with a disposition to inflammation in the glands of the head and throat.

La Fosse divides it into mild or malignant, and false or bastard strangles; but these definitions do not seem to be well founded, for though there are cases in which the symptoms are milder than others, it does not appear that any specific virus is ever left by which future depositions are formed, called vives. There is no reason to suppose it infectious, though it has been said to have been given by inoculation.

The disease appears to consist in a specific attack on the parotid and submaxillary glands, more frequently the latter, and which most horses have once during their lives, and once only, generally between the ages of four and six years; but as this specific attack does not render these glands invulnerable to future inflammatory affections, from cold or other causes, so whenever any after swelling occurs, ignorant farriers suppose it connected with the strangles, which has not, they think, perfectly drained off, and such swelling is called vives.

Symptoms.—The strangles usually commences with the general symptoms of catarrh, or, as more familiarly expressed, like a cold and fever; sometimes there is so little symptomatic affection, particularly in mild weather

at grass, that the glands gather, burst, and heal, without the matter being hardly noticed.

In general cases however, it does not pass off thus easily; but there is, besides the swellings under the ear, or under the throat, some cough, dulness, and loss of appetite, and it is then frequently mistaken for the epidemic catarrh, or distemper; but from this it may be distinguished by the swellings themselves, which are more hot and tender, and more enlarged in the strangles than in catarrh.

The age of the animal attacked, will also usually assist in detecting the strangles; add to which, that the epidemic or distemper, the constitutional affection generally runs higher.

No great harm however can arise, in the event of the one complaint being mistaken for the other. In all cases of doubt, with regard to strangles, very hot fomentations only should be used to the swellings, which tend to allay the tension of irritability, without materially promoting either the resolution or suppuration.

Treatment.—When the inflammatory symptoms are considerable, treat exactly as directed under catarrh, with the exception of bleeding, which is not to be attempted unless there is some urgency in the case, such as hard quick pulse, with heaving of the flanks, the extremities cold, the cough painful, and the nostrils red. If the throat should be likewise sore, have it blistered, keep constantly to the head a nose bag, with a warm mash of bran, sprinkled with spirits of turpentine, and tincture of camphor, having first blistered the part.

The tumors having suppurated, sometimes burst inwardly, in which case the future cure must be left principally to nature, and nothing more in general will be requisite than mild food, and a laxative ball composed of

Aloes	3	drachms.
Calomel	1	,,
Tartar Emetic	1	,,
Nitre	3	,,

Made into a ball.

When the tumors point outwardly, as soon as the matter is felt to fluctuate freely, but not before, they may be opened with a lancet, which will tend to shorten the complaint.

Megrims.

This disease is occasioned by a pressure on the brain, caused by an unusual flow of blood to it; the flow of blood through the brain is ten times greater in quantity, than through any other portion of the body. To prevent as far as possible any unusual flow of blood to this organ the arteries pursue an extremely winding course, and enter the skull through small holes in the bony process. These holes are so small, that they will admit but of little enlargement of the blood vessels, and thus to a great extent, the process of inflammation is arrested.

Symptoms.—The megrim is the name of the simplest form of inflammation, arising from the above causes; this most commonly appears when a horse is over-driven. When attacked, he will suddenly stop, and shake his head—if allowed to stand for a few minutes this will go off again. Sometimes he will be quietly in a state of complete torpor, at other times he will struggle with great violence, and yet, be unable to rise; in either of these conditions he will continue from five to ten minutes, when he will gradually resume sensibility, but after these attacks he generally exhibits symptoms of dulness and exhaustion.

Remedy.—Immediately after the first attack, take six quarts of blood, a short time after give a dose of physic, in the form of a ball, consisting of the following:—

Barbadoes Aloes	7	drachms.
Calomel	2	,,
Tartar Emetic	1	,,
Ginger	1	,,

Bran mashes, and gentle exercise every day.

If a horse has had one attack of this malady, he is liable to a return of it, and the most prudent plan is, to part with the animal, as he cannot afterwards be depended upon.

Palsy.

Causes.—The palsy may arise from high feeding, and want of proper exercise; sometimes it proceeds from hard working, without a sufficiency of wholesome food, or it may be produced by falls, blows on the head, or loins, injury in casting and turning a narrow stall, and occasionally it is the result of mere old age, in which case it is hopeless to attempt a cure.

Symptoms.—When a horse is seized by palsy, the use of some particular member is lost—sometimes one or more limbs, and especially the hind legs. When the brain is affected, the use of one side is totally taken away, the horse falls suddenly, and the muscles of the affected parts become so placid and relaxed, that all attempts to rise are fruitless. However, the disease in young horses may often be cured without much difficulty.

The following purge will be found beneficial:—

Barbadoes Aloes	7	drachms.
Calomel	1	,,
Castile Soap	2	,,
Ginger	2	,,

The food to consist of bran mashes, and lukewarm water; let the affected part be well rubbed, with a strong blister.

The Staggers, or Apoplexy.

Symptoms.—The premonitory appearances are a low hanging of the head, and either supporting it on the manger, or extending it nearly to the ground. He moves through and fro while standing, and seems liable to fall at every movement; his sight and hearing are

much impaired. He will remain in this condition from one to twelve hours, he then falls. His eyes are open and protruding, with a fixed, seemingly unconscious stare—he grinds his teeth; the strong convulsive twitchings follow, and these are the certain preludes of death.

Causes.—A deranged state of the digestive organs is the most ordinary cause, and this is the effect of over-feeding. Some persons are so foolish as to suppose that horses may have as much grain as they can eat, but this is a serious mistake, because, even without the aid of water, the grain will swell in the stomach.

Remedy.—The horse must be bled; take eight quarts of blood from the jugular vein, and after some time has elapsed, this should be repeated, but a lesser quantity. If the lower intestines or rectum is over loaded, the hand should be forced up, and the bowels relieved, and if the animal exhibits symptoms of relief, the following medicine should be administered in the form of a ball:—

Barbadoes Aloes	7	drachms.
Calomel	2	,,
Ginger	2	,,

These to be mixed with honey, in a sufficient quantity to form a ball; also, give several clysters, composed as follows:—

Oatmeal	3	quarts.
Common Salt	3	ounces.
Linseed Oil	½	pint.

These clysters may be repeated twice or three times a day. A blister may be applied behind the ears, with benefit; should the horse sufficiently recover to be able to take food, boiled barley, scaled bran or oatmeal, and luke-warm water should be given to him for some days, until he is able to masticate hay, which ought to be of the best quality.

To complete the cure, the following may be given in a ball:—

Cream of Tartar	1 ounce.
Nitre	4 drachms.
Tartar Emetic	1 ,,

Epilepsy.

Cause.—Epilepsy sometimes proceeds from a plethora, or fullness of blood, and often from violent exercise or surfeit, and from any of the causes that produce lethargy or staggers.

Symptoms.—When a horse is attacked with epilepsy, he reels and staggers, and his eyes seem fixed in his head, he appears quite stupid, and stales and dungs insensibly, trembles, looks around him, and falls suddenly; sometimes he remains immoveable, with his legs stretched out as if he was dead, except a quick motion of the lungs and heart, whilst his flanks work violently; occasionally, the convulsions which follow are slight, at other times violent—the head and fore part are most singular. When the fit is going off, he generally discharges a white and dry foam from the mouth; after the fit is over, he shakes his ears, and eats and drinks as though nothing had occurred.

In old horses this disease generally proves incurable, since, through their weakness, little assistance can be given to the operation of medicines, but in ordinary cases the following may prove efficacious, care being taken to open their bowels previously by clysters, and a purgative:—

Asafœtida	2 drachms.
Tartar Emetic	1 ,,
Camphor	1 ,,

made into a ball, and given every twelve hours, and after four days, give the following in a drink:—

Castor Oil	1 pint.
Tincture of Opium	1 ounce.
Powdered Ginger	1 ,,

Diet.—Bran mashes, and gentle exercise.

Worms.

There are different kinds of worms found in the intestines of horses, and when they become numerous, often prove injurious to the constitution.

Loss of appetite, griping pains, a rough coat, and tucked up belly, and hide bound, are symptoms of worms. Teres, or long white round worms, very much resembling in form the common earth worm, which is met with from 5 to 10 inches in length in the intestines; and, itching of the rectum, evinced by a quick twitching of the tail, and a small quantity of mucus, which hardens and assumes the appearance of a white powder at the anus, is indicative of ascarides, small needle-formed worms, which lodge in the large intestines, and are frequently found in great number to the coaccum. A third species sometimes, although of much rarer occurrence, inhabit various parts of the intestinal canal from the stomach downwards; this is the tape worm, which is known from its broad flat tape-like appearance, and consisting of many articulated joints. This species is most formidable, and most difficult to be removed.

For the expulsion of worms, the following is the best remedy to be given, every morning and evening for three days, in bran mashes:—

Tartar Emetic	1 drachm.
Calomel	1 ,,

in each mash, and a purgative to be given the fourth morning, composed as follows.

Barbadoes Aloes	6	drachms.
Ginger	1	,,
Calomel	1	,,
Tartar Emetic	1	,,

Castile Soap to make it up with.

The horse to have only seven pounds of hay each day, during the time, and when the purgative commences to operate, give two ounces oil of turpentine in half a pint of luke-warm water, in a drench, and trot the animal for five minutes.

CLASS IV.

OPHTHALMIA — GUTTA SERENA — INFLAMMATION OF THE EYE — DEAFNESS — LOCKED JAW.

Ophthalmia, or Moon Blindness.

Should four days pass, and the inflammation not be abated, we may begin to suspect that it is the ophthalmia, especially if the eye is very impatient, and the cornea clouded. The humour often loses its transparency, even the iris changes its color, and the pupil is exceedingly contracted. The veterinary surgeon has now an obstinate disease to combat, and one that will generally maintain its ground in spite of all his efforts; for two or three weeks the inflammation will remain undiminished, or if it appears to yield one day, it will return with redoubled violence on the next. At length, and often unconnected with any of the means that have been used, the eye begins to bear the light—the redness of the membrane of the lid disappears, the cornea clears up, and the only vestige of disease which remains is a slight thickening of the lids, and apparent uneasiness when exposed to a very strong light.

If the owner thinks that he has got rid of the disease he will be disappointed, for in the course of a month or two, either the same eye, or the other undergoes a second or similar attack. All again seems to pass over, except that the eye is not so perfectly restored, and a slight, deeply-seated cloudiness begins to appear, and after repeated attacks and alterations of disease from eye to eye, the affair terminates in opacity of the lens or its capsule, attended with perfect blindness from its periodical return, and some supposed influence of the moon.

What is the practitioner doing all this while. He is only a useless spectator if he does not apply the following remedies. Bleed from the angular vein, at the corner of the eye, not from the temporal artery, for that does not supply the orbit of the eye; also scarify the lower corner with a keen lancet, and take four quarts of blood from the jugular vein the following day, and give the following purgative:—

Barbadoes Aloes	6	drachms.
Calomel	1	,,
Castile Soap	4	,,

The animal to have bran mashes, eyes covered, gentle exercise in a shady place, and only four pounds of hay per day. The eyes to be washed three times a-day with the following lotion:—

Crude Sal Amoniac	2	drachms.
Vinegar	1	pint.
Rain Water, boiled and cooled	1	,,

Put into a bottle.

Gutta Serena.

Another species of blindness, commonly called glass-eye. The pupil is more than usually dilated—it is immoveable, and bright and glassy. This is palsy of the

optic nerve, and is usually produced by determination of blood to the head. The treatment of gutta serena is quite as difficult as that of cataract. We have heard of successful cases, but we never saw one, nor should we be disposed to incur much expense in endeavouring to accomplish impossibilities, reasoning from the cause of the disease. We should bleed and physic, and administer strychnine in doses, commencing at half a grain, and not exceed two grains, morning and night, very carefully watching it. If we succeed, it must be by constitutional treatment; as local treatment, the seat of disease is out of reach.

Common Inflammation of the Eye.

Inflammation of the eye may be considered under two forms, the common and manageable, and the specific and fatal. The common inflammation is generally sudden in its attack—the lids will be found swelled, and the eyes partially closed, and some weeping; the inside of the lid will be red—some red streaks visible in the white of the eye, and the corneu slightly dim. This is occasionally connected with some degree of catarrh or cold; but it is often unaccompanied by this, and depends on external irritation as a blow, or a bit of hay, or seed, or husk within the lid, and towards the outer corner where the haw cannot reach it; therefore the lids should be always carefully examined as to this possible source of the complaint. The animal should have a dose of physic to commence with, composed as follows:—

Barbadoes Aloes	6	drachms.
Calomel	1	,,
Castile Soap.....	4	,,

Made into a ball.

Also take some blood from the temporal artery, and wash the eye with the following lotion morning and evening:—

Sugar of Lead	1 drachm.
Sulphate of Zinc	1 ,,
Water	1 pint.

Have the eyes covered, and give bran mashes with some carrots. If the above lotion does not improve the eye in three days, stop it and apply the following:—

Cider Vinegar	½ pint.
Salammoniac	1 drachm.
Water	½ pint.

Have the eye washed three times a day, and exercise the animal morning and evening for half an hour at the time, in a shady place.

Deafness.

The beautiful play of the ears has ceased, and the horse hears not the voice of his master. Much of the apparent stupidity of some horses is attributable to their imperfect hearing. It occasionally appears to follow the decline of various diseases, and especially of those that affect the head and the respiratory passages. It has been the consequence of brutal treatment, closing the conduit of the ear, or rupturing the tympanum; and it is certainly as in other animals, the accompaniment of old age. In the present state of veterinary knowledge, it is an incurable complaint; the only thing that can be done is, not to punish the poor slave for his apparent stupidity, produced perhaps by over exertion in the service of his master.

Locked Jaw, or Tetanus.

This disease has a two-fold origin, the one is caused by wounds, and the other has no apparent cause, but is supposed to be symptomatic of some constitutional causes, as intestinal irritation from parasitic animals. Both varieties are denominated *tranmatic* and *idiophatic*, in technical phraseology.

Wounds in the leg, producing solution of continuity of the nervous filaments, irritation from worms in the alimentary canal, as likewise the operation for docking and nicking, are the most frequent causes of this obstinate and fatal disease. From whatever causes it may arise, the brain and spinal cord are undoubtedly its principal seat. The "rationale" of this fearful remedy is this—a wound in a part favourable to the maintenance of prolonged irritation, is capable of exciting a particular region of the spinal cord, from which the state of excitement spreads, so as to involve not only the whole cord, but also the medulla oblongata, and in this state a large portion of the motor nerves participate, so as to induce tonic contraction of the muscles they supply.

Tetanus

Consists not in an inflammatory affection of the cord, or in its membranes, nor in congestion of them, but simply in a state of prolonged physical excitement the natural polar force of the centre being greatly excited, and kept so by the constant irritation propagated to it by the nerves of the wounded part.

Symptoms.—Tetanus, consisting in a constant spasm of the muscles of the head, neck, and spine, is slow in making its appearance. The horse does not feed well, partly chews, and drops its food and gulps water. The motion of the jaws is observed to be limited, and some saliva escapes from the mouth; this stage would be the most appropriate for administering medicine, but unfortunately, it is of short duration—perfect rigidity of the voluntary muscles, and closure of the jaws, quickly supervene. The head is generally protruded, and cannot be bent; the eye is retracted within its socket, with the haw projecting over it; the nostrils are expanded, the ears erect, and the countenance expressive of anxiety and extreme agony; the tail is erect and quivering; the hind-legs spraddling, and the fore-legs projecting like a stool; the pulse is at first normal, but soon

becomes quick, small and irregular. If the poor animal is touched, or the slightest blast of air directed over his body, the quickening of the pulse, and recurrence of the spasms, indicate his fear and pain; thus, the disease continues for 9 or 10 days, at which time the animal is exhausted from the expenditure of nervous energy.

Treatment.—As it is a diseased state of the nerves which conveys motor influence to the muscles, the most appropriate treatment consists in that which is to be directed to their origin — the brain and spinal cord. The brain has been trepanned, with a view to increase the pressure on the masses, and the whole region cerebral of the spine has been blistered; but although relaxation of the muscles, and a temporary diminutive of the spasms have thus been effected, still, they are of no avail, when they are confided in alone; and as a torpid and sluggish condition of the bowels is an invariable concomitant symptom, the exhibition of croton oil in doses of half a drachm is highly commendable, without the slightest fear of causing inflammation of the bowels, the animal enjoying an undoubted immunity from any such untoward feature, when attacked by this formidable disease. To sum up, the treatment is of a two-fold nature, local and constitutional.

As it is invariably the cause of a wound, the wound must be searched for, and cauterised with actual cautery, (red hot iron,) or lunar caustic, and then dressed with digestive ointment.

The constitutional treatment consists in tranquilising the system, and the most potent agent here is bleeding, to the extent of 20 pounds; administering powdered opium in a dose of two drachms, at first in the form of a ball, and repeating the opium in diminished doses of a drachm every four hours.

The following purgative drench may be given with advantage, if the jaws can be opened.

Barbadoes Aloes	1 ounce.
Ginger	3 drachms.
Treacle	2 ounces.
Oil of Aniseed	30 drops.

For the purpose of producing counter irritation, the following blister may be rubbed along the spinal region, and over the whole body :—

Cantharides	1 ounce.
Euphorbrum	2 drachms.
Oil of Turpentine	1 ounce.
Hogs' Lard	6 ,,

Mix to make Paste Blister.

Some veterinary surgeons recommend the friction of a liquid blister, composed of equal parts of oil of turpentine and tincture of cantharides; and they suggest the advisability of covering the whole spinal region with sheep skins, as fresh as possible from the animal. If the bowels are open, give the following ball :—

Crude Opium	1 drachm.
Camphor	2 ,,
Asafœtida	2 ,,

Mix into a ball, and repeat every fourth hour.

Some veterinary surgeons recommend hot fomentations, while others recommend cold—some recommend bleeding, and some do not. The advocates of the one system condemn the supporters of the other.

My readers will find my opinions embodied in the above, and will do well to adopt them, and put them into practice, as I have never found them to fail in mild cases, but I must confess, that in obstinate cases the most skilful treatment has been baffled, the poor exhausted animal having succumbed to its fatal influence.

In administering the balls to horses affected with this disease, they are not to be given, as in ordinary cases;

each ball must be broken into small pieces, on the end of a stick, or what is better, a bit of whalebone, or the ball may be dissolved in a pint of decoction of rue, and given as a drench morning and evening, with a small horn.

Considerable time should be taken, and great care and caution observed in the administration of medicine, as awkwardness in manipulation increases the convulsions of the poor brute, and may cause no alleviation of his sufferings, or amelioration of his symptoms.

CLASS V.

JAUNDICE — PLEURISY — CONSUMPTION — LOSS OF APPETITE — FARCY — GLANDERS — FOUL FEEDING.

Jaundice.

This disease is generally attended with some local affection of the liver. It may proceed from want of free perspiration, or from anything that creates severe action, especially from the liver—sometimes it is occasioned by high feeding, or habitual costiveness.

Symptoms.—This disease is indicated by the eyes appearing of a dusky yellow color; the inside of the mouth and lips, and eye-lids, also look yellow; the animal appears dull and sluggish, and refuses all kinds of food; his urine is of a dark brownish color, and when lodged on the ground, seems like blood; he also stales with difficulty; his bowels are costive, and his motions of a pale yellow color; the pulse is irregular, and he is feverish in a greater or lesser degree.

Cure.—Various are the means proposed by farriers for the proper mode of curing this disorder. Some recommend bleeding in the first stage, which I have reason to

believe is very necessary. I would also give, every second evening, the following medicine in a ball, until the bowels are freely open :—

Barbadoes Aloes	1	drachm.
Calomel	1	,,
Castile Soap	2	,,

The animal to have bran mashes morning and evening, and carrots at twelve o'clock, to the amount of eight pounds; best hay, six pounds per day; drinking water to be given sparingly; walking exercise half an hour morning and evening. I have never found this simple mode of treatment fail.

Pleurisy.

Cause.—The pleurisy may be produced by the same cause as inflammation of the lungs; indeed, inflammatory disorders are always brought on by a sudden suppression of perspiration.

Symptoms.—In inflammation of the plurea, or membrane, which lies in the chest, and hence called pleurisy. The symptoms vary so little from inflammation of the lungs, that it is difficult to distinguish. In pleurisy a horse shows great uneasiness, and is continually shifting about; he often strives to lie down, but immediately starts up again, and turns his head to the side affected; whereas, a horse with inflammation of the lungs moves tranquilly, and never attempts to lie down. In pleurisy a horse's mouth is parched and dry, but in inflammation of the lungs, when opened, a ropy slime runs out generally in great abundance.

Cure.—The cure of pleurisy and inflammation of the lungs is the same; except where accidental symptoms occur to require variation, bleeding from 4 to 6 quarts is particularly necessary. A horse should be kept on light open diet for a fortnight, or three weeks, such as bran morning and evening; oats, five pounds, mixed with

carrots cut up at twelve o'clock ; gentle exercise morning and evening, for half an hour at the time.

Purging is also very proper in this disease, but it should be very gentle, and composed as follows :—

Barbadoes Aloes	3	drachms.
Calomel	1	,,
Ginger	½	,,
Castile Soap	4	,,

This ball may be repeated after a week, provided the horse does not appear weak from the first dose.

Consumption.

Causes.—Consumption may proceed from various causes, from colds imperfectly cured, or from the influence of the farcy or glanders fixing on the lungs. Hot and irritable horses are most subject to this disease, as they generally exhaust themselves by too great exertion.

Symptoms.—Though this complaint is not very prevalent among horses in this country, it sometimes occurs, and is indicated by a loss of vigor and strength—the animal loses his appetite, and flesh soon, and frequently stales and dungs; some survive for a time, and others go off very suddenly.

Cure.—As consumptions are preceded by inflammation, bleeding is necessary, after which the bowels should be gently opened by clysters and purges. The following ball may be given :—

Barbadoes Aloes	5	drachms.
Calomel	1	,,
Castile Soap	4	,,

The horse should be kept moderately warm, and have bran mashes and water with the chill taken off.

The following ball may be administered every other night, for three or four times, and then omitted for a few nights, and repeated again if necessary.

Tartar Emetic	2	drachms.
Asafœtida	1	,,
Nitre	3	,,

Liquorice Powder to make the ball.

This ball will relax the skin, and insensible perspiration will be promoted. During the administration of these medicines, the horse should be gently exercised every day for half an hour; his food should be green, if possible, and in the winter season, carrots will form a good substitute. When he recovers, his work should be light and moderate for some time, and he should be kept in the fresh air as much as possible.

Loss of Appetite.

Causes.—This disorder is frequently the mere symptom of other diseases, and must be treated accordingly. It is, however, sometimes the effect of weakness on the stomach, induced by the improper use of medicines, and occasionally it is produced by fatigue, a want of proper exercise, or the stomach being over loaded with indigestible food.

Symptoms.—This state of disease is generally termed chronic indigestion, and is indicated by a want of appetite, and also a roughness and staring of the coat.

Cure.—Should the horse have no inflammatory complaint, and it is evident that the loss of appetite arises from a weakness of the stomach, a cordial ball may be given every day, composed as follows:—

Caraway Seeds, powdered	5	drachms.
Ginger, powdered	3	,,
Oil of Olives	16	drops.

Made up with honey.

These balls will tend to strengthen the stomach and renew the appetite. It will be necessary to keep the horse clean, and regular in his bowels; nourishing food

composed of bran morning and evening; six pounds of good oats, with carrots at twelve o'clock; clean spring water four times a day to drink; exercise three times a day, half an hour each time.

Farcy.

Cause.—This disease may be attributed generally to suppressed perspiration, and also to hot and crowded stables, and is more prevalent among waggon and post horses than any others. After been thrown into a violent heat, and ridden through brooks and ponds to wash them, they are too frequently allowed to stand a considerable time at the door of a public house, which has in many instances occasioned farcy.

Symptoms.—The horse appears dull—his skin tightens and dries—he feeds slowly—his respiration becomes quicker than usual—his hind legs get slightly swollen, and the glands rise up in small lumps or knots, which at first are hard and sore, and are usually termed farcy buds, and in a few days suppurate, and emit an unhealthy ichorous discharge.

The edges of these ulcers have a cancerous appearance as the disease advances; the whole body becomes affected, and partial swelling sets in, particularly on the inside of the hind legs and nose, and frequently terminate in glanders. This disease is sometimes very obstinate and difficult to cure.

Cure.—When confined to a single limb, and attended with great swelling and inflammation, if the horse be in good condition, take five quarts of blood, and give the following purgative:—

Barbadoes Aloes	6	drachms.
Calomel	1	,,
Nitre	4	,,
Castile Soap	2	,,

Made into a ball.

The horse to have bran mashes and lukewarm drinks.

When the above has ceased to operate, give in a bran mash every evening for nine days :—

Calomel	½ drachm.
Nitre	3 ounces.

The swelled part to be fomented three times a day with very hot decoction of marsh mallows, three gallons ; salt one pint; vinegar one pint, and a rowel may be introduced at the lower part of the swelling, and also in the chest.

After he has taken the above powder for nine days, give the following in a ball :—

Aloes	5 drachms.
Calomel	2 ,,
Ginger	2 ,,

When the whole system is affected with this disease, the extremities swelled, the sores numerous, and the animal assumes a haggard appearance, the following may be given every day for a week :—

Cantharides	3 grains.
Arsenic	4 ,,
Pepper	1 scruple
Sulphate of Iron	1 drachm.

Made into a ball.

The horse to have very gentle exercise, and good nourishing food, such as boiled potatoes, carrots and oats ; he must not be exposed to wet or cold, and his clothing should be warm. A horse afflicted with farcy, should be separated from those in health.

Glanders.

Cause. —It is difficult to ascertain the primary cause of this disease, it is however said to arise from contagion or improper stable management ; close and ill ventilated stables mostly witness its ravages, or it may be produced

by anything that weakens the constitution, or from general debility.

Symptoms.—This fatal and loathsome disease has been the scourge of this noble race of animals, to our knowledge, for the last three hundred years. With regard to the discharge from the nostrils, it is almost transparent, and hangs about the nostrils in a peculiar manner. Where a necessity exists for an immediate decision relative to the disease, the following is the best manner of proving it. If the matter issuing from the nose in these deceptive cases, arise from cold, if dropped into water, soon rises to the surface, and swims—but if the matter from a glandered horse be so dropped into water, it sinks. There is also an immoveable kernel in the near gland, with ulceration up the nostrils.

A singular character of the glanders is, that it generally attacks one nostril only, and that the left one. Mr. Dupary, a celebrated veterinary surgeon, and director of the school of surgery at Toulouse, mentions that out of 800 cases of glanders which occurred during his practice, only one was affected in the right nostril. Ulcers will appear up the nostrils, the horse will lose his flesh, his belly will be tucked up, his coat will be unthrifty, and readily come off, the appetite will be impaired, the strength will fail, the ulcers up the nostrils get large and numerous, and the air passages being obstructed, a choking noise is heard, at every act of breathing. The lungs are now diseased and filled with ulceration, and at length the horse dies.

Cure.—This disease is deemed incurable, and although some writers prescribe their far-famed receipts for its cure; it is only an imposition on the credulous, without any prospect of success.

When it is clearly proved that a horse is glandered, he should be immediately destroyed, and his manger, and every other part of the stable well washed with a strong solution of soda and water, and afterwards with chloride lime, and the iron-work painted.

Foul Feeding.

Cause.—This is a symptom of indigestion, and in most cases of this nature there is evidently an acid upon the stomach.

Symptoms.—This affection of the stomach is evinced by the horse eating in a voracious manner, greedily swallowing substances that are indigestible, such as mortar, dirty foul litter, or even the dung of other animals; such horses are termed foul feeders.

Cure.—In the removal of this disorder, a purge should be first administered, the following will prove useful:—

Barbadoes Aloes	6	drachms.
Calomel	1	,,
Oil of Mint	20	drops.
Castile Soap	4	drachms.

Made into a Ball.

When the operation of this purgative has subsided, the following ball may be given every other day, until the disease appears perfectly cured.

Gentian, powdered	3	drachms.
Sulphate of Iron	1	,,
Ginger	2	,,

During the course of these medicines, the horse should have regular exercise, and the stable kept very clean; he should also have a quantity of clean straw under the manger, in order that there may be no inducement for him to consume substances that are detrimental.

CLASS VI.

SPASMODIC COLIC—FLATULENT COLIC—ENTANGLEMENT OF THE GUT—STONE IN THE INTESTINES—HERNIA, OR RUPTURE—SUPPRESSION OF URINE—PROFUSE STALING.

Spasmodic Colic.

This disease generally attacks rather suddenly, and is brought on by various causes; sometimes it is occasioned by drinking a large quantity of cold water, when the body has been heated, and the motion of the blood accelerated by violent exercise. In horses of delicate constitutions that have been accustomed to hot stables and warm clothing, it may be brought on merely by drinking water that is very cold; bad hay appears to be another cause of the complaint, but it frequently occurs without any apparent cause, and then probably depends upon a spasmodic action of the stomach, or bowels, occasioning an obstruction of the intestines and a confinement of air.

It has not been ascertained whether this air be produced by a fermentation of the contents of the bowels, or formed by the arteries of their internal coat; whichever of these is the source of the air, there is no doubt that the immediate cause of its formation and confinement is weakness, or loss of vital energy.

Symptoms.—This disorder in general, comes on very suddenly, without any premonitory signs. The horse becomes very restless, shifts his position, paws the ground, and looks round with anxiety at his flanks, sometimes raising his foot as high as his belly, and striking it violently, he will also lie down and roll about on his back. In a few minutes the spasm subsides, and the animal, after shaking himself, will resume feeding. At longer or shorter intervals, the attack is renewed, but with increased violence, he will throw himself with considerable force on the ground, will break into a copious perspiration, and heave greatly at the flanks. These spasms are renewed at intervals, and gradually

become less frequent and less severe; or, if on the contrary, they are more frequent and acute, and at length manifest a nearly uninterrupted series, then it may be suspected that violent inflammation has taken place.

Cure.—Give the following quantities in a drink:—

Tincture of Opium	1½ ounces.
Spirits of Aether-Nitre	2 ,,
Linseed Oil	1 pint.

If there is no relief after the above, it will be advisable to take four quarts of blood with a view to prevent inflammation, and remove the spasmodic contraction of the intestines; also, give several injections composed of six quarts of warm water, and six ounces of common salt mixed, and if the pain continues, rub in the following embrocation all over the belly:—

Mustard, powdered	6 ounces.
Camphor.....	1 ,,
Oil of Turpentine	2 ,,
Water of Ammonia	2 ,,

The horse to have bran mashes, half his usual complement of hay, and gentle exercise; he may have a feed of boiled barley every night for a week.

Flatulent Colic.

This is a quite different disease from the former; it is not spasm of the bowels, but inflammation of them, from the presence of gas emitted by indigested food, whether collected in the stomach, or small or large intestines; all kinds of vegetable matter are liable to ferment.

In consequence of this fermentation, gas is evolved to a greater or lesser extent, perhaps to 20 or 30 times the bulk of the food. This may take place in the stomach, and if so, the life of the horse is in immediate danger. This extrication of gas usually takes place in the colon

and cœcum; and the distention may be so great as to rupture either the one or the other, or sometimes to produce death without either rupture or strangulation, and that in the course of a day and night.

Symptoms.--The horse falls down as if he were shot. In the stable he paws the ground, lies down, rolls, starts up all at once, and throws himself down again with great violence, looking wistfully at his flanks, and making many fruitless attempts to stale.

Hitherto, the symptoms are not much unlike spasmodic colic, the character of the disease soon begins to develope itself. It is one of the large intestines, and the belly swells all round, but mostly on the right flank. As the disease proceeds, the pain becomes more intense, the horse more violent, and at length death closes the scene.

The treatment is very different from that of spasmodic colic, in consequence of the disease being caused by a combination of hydrogen, with some other gas that has a strong affinity for chlorine. The chloride of lime dissolved in water, is administered in the form of a drink; the chlorine separates from the lime as soon as it comes into contact with the hydrogen, and muriatic gas is formed. This gas having a strong affinity for water, is absorbed by any fluid that may be present, and gutting its gaseous form, either disappears, or does not retain a thousandth part of its former bulk. All this may be very rapidly accomplished, for the fluid is quickly conveyed from the mouth to every part of the intestinal canal. Bleed freely from 4 to 6 quarts of blood, throw up several clysters, and have the belly well rubbed from time to time.

Entanglement of the Gut.

This is caused by colic, in consequence of the animal throwing himself about, while suffering under the pain of that complaint; portions of that intestine called the ileum, becomes twisted and knotted, and drawn together with astonishing firmness—there is no cure for this complaint.

Stone in the Intestines.

Horses that are subject to very frequent attacks of colic pains, have usually stony masses in the cœcum or colon, sometimes they are some pounds weight; these obstructing the passage of the gut, produce colic pains, and at other times when exceedingly large, by pressing upon the mucous membrane, produce inflammation. But as yet, no distinctly marked symptoms have been detected, by which their presence can be ascertained.

Hernia, or Rupture.

A portion of the gut protrudes from the abdominal cavity through the abdominal ring into the scrotum, and the opening is so narrow, that the gut, gradually distended by fœces, or thickened by inflammation, cannot be returned without the use of the hernia knife, which must be used with caution. The following is the proper way to perform the operation:—when the gut falls into the scrotum, have the horse thrown on a bed of straw, then put on his back, placing a bag stuffed with straw at each side; then open the scrotum, and remove the testicle from that side of the scrotum in which the hernia occurs, taking particular care not to leave the knife touch the gut when opening the scrotum. If you cannot return the gut through the same passage it came from, set your knife so that you will be able to know when you enter it through the ring, what portion of that ring you will cut, taking care to face the knife outwards towards the hip; press on the spring, and you will be able to cut the ring large enough to allow the gut to return. The horse to have a mild purgative ball, composed as follows:—

Aloes	4	drachms.
Calomel	1	,,
Tartar Emetic	1	,,
Nitre	3	,,

Castile Soap to make the ball.

The animal to have bran mashes, also the scrotum to be fomented twice a day.

Suppression of Urine.

This complaint may arise from a variety of causes, as whatever has a tendency to affect the parts about the neck of the bladder, particularly matters of food, blows on the parts, the contractions produced by spasms of the muscles in the parts, and others of the same nature.

Symptoms.—It is indicated by great uneasiness, irritation, and loss of appetite, with either a partial or total suppression of urine.

Cure.—Clysters and mild purges should first be administered for the purpose of clearing out the bowels, after which the following may be used:—

Camphor	2 drachms.
Opium, powdered	1 scruple.
Nitre.....	2 ,,
Liquorice Root, powdered ...	4 ,,

To be given one ounce a day in a ball, for four days; and it will be highly beneficial, during the course of these medicines, to have a flannel cloth frequently squeezed out of some hot fomentations of herbs, and applied to the parts between the legs of the horse, as near the neck of the bladder as possible. The animal should have but very little water to drink, with the chill taken off.

Profuse Staling.

Causes.—This generally arises from bad food, especially food injured by the effect of salt water.

Symptoms.—It is easily known by the abundant discharge of rather pale urine, attended with coldness of the skin, and a staring of the coat.

When the complaint is of long standing, great weakness of the body is produced with a loss of appetite.

Cure.—On the first attack of this disease, a ball, composed as follows, will be found of service:—

Catheicu	2	drachms.
Opium, powdered.....	1	,,
Alum	2	,,
Prepared Chalk	3	,,

The animal to have thin gruel to drink instead of water; the legs should be bandaged, and the ball repeated every day; his diet to be bran mashes, and no exercise.

CLASS VII.

RHEUMATISM—HIDE BOUND—CHEST FOUNDER—FEVER—DIARRHEA—FALLING OF THE FUNDAMENT—FALLING OF PENIS.

Rheumatism.

Causes.—Sudden and continued exposure to wet and cold, are invariably the precursors of this disease. It is most prevalent in horses which are kept in stables, and warmly clothed.

Symptoms.—As in the human subject, this malady assumes two forms, viz., the acute and chronic. The acute form is characterised by a certain degree of fever, whereas in the chronic type, the fever is absent; it is a mere local affection, and almost isolated.

A horse attacked by rheumatism, moves the affected limb without flexion of its joints; the lameness then evidently subsides to a certain degree after exercise, and again after rest, the lameness returns with redoubled energy.

The above marks constitute the line of demarcation between lameness arising from rheumatism on the one hand, and accidental causes or injuries of a local nature on the other.

When the loins are attacked, the horse suffers extreme pain, the locomotive muscles lose their wonted energy, dorcal and lumbar flexibility are suspended, and he is obliged to step short alike on all-fores.

Treatment.—Give bran mashes, and keep him well covered, and rub the parts affected with the following embrocation :—

Liquor Ammonia Fort	1	ounce.
Spirits Camphor	1	,,
Spirits of Turpentine	1	,,
Tincture of Opium	½	,,

Mix in a bottle, and shake well before using.

The animal to have walking exercise twice a day.

Hide Bound.

This term implies a tightness of the skin, which feels as if it were glued to the ribs, the coat having, at the same time, a rough unhealthy appearance.

Cause.—This state of the skin accompanies various complaints, such as farcy, founder, chronic cough, grease, general debility, and glanders ; when they have assumed the constitutional character, are all accompanied by an impaired state of the digestive organs, and to them our first remedies must be applied, and as soon as the cause is removed, the skin will be restored to its natural healthy condition and appearance.

Cure.—If the complaint is connected with any of the maladies to which I have referred, then the horse must be put under medical treatment, as the complaint is connected with the suspension of some important secretion, and the alimentary canal generally. Give the following mild purgative every day for a week until the bowels are open.

Barbadoes Aloes	1	drachm.
Calomel	½	,,
Nitre.....	2	,,

Made into a ball with treacle.

The horse to have bran mashes, and after the bowels are open, stop the above ball, and give the following every day for nine days in a ball :—

Black Antimony	3	drachms.
Nitre	2	,,
Sulphur	4	,,

The animal to have warm clothing, and walking exercise morning and evening.

Chest Founder.

The muscles are occasionally the seat of a singular and somewhat mysterious disease. The horse has considerable stiffness in the movement of his limbs, but evidently not referable to the lower extremities. There is tenderness about the muscles of the breast, and occasionally swelling; I believe it to be nothing more than rheumatism, produced by suffering the horse to remain too long tied up, and exposed to the cold, or riding him against a very bleak wind. Sometimes a considerable degree of fever accompanies this, but bleeding, physic, a rowel in the chest, and warm embrocation composed of

Liquor Ammonia	1	ounce.
Spirits of Turpentine	1	,,
Spirits of Camphor	1	,,
Olive Oil	1	pint.
Tincture of Opium	1	ounce.

Mixed together, and rubbed in every second day, for three minutes at the time.

The horse to have warm clothing and gentle exercise.

Fever.

The fevers of horses bear very little analogy to those of the human body, and require a different treatment. Many writers on farriery, as Mr. White said, described a great variety of fevers, but their observations appear

to have been drawn from the works of medical authors, and their reasoning seems to be entirely analogical I could only discover two kinds of fever, the one is termed simple, the other symptomatic —for example, if the lungs, bowels, or stomach were inflamed, the whole system would be thrown into disorder, and a symptomatic fever produced; but if a collapse of the perspirable vessels happens to take place, the blood will accumulate in the interior parts of the body, and though inflammation is not produced by it, the unequal distribution of the blood alone will occasion that derangement in the system, which constitute the simple fever.

The simple fever does not occur so often as the symptomatic, nor is it by any means so formidable in its appearance; yet, it is necessary to give it the earliest attention, for unless nature receives timely assistance, she will be sometimes unable to get rid of the load which oppresses her, and the blood will accumulate in the interior part of the body, until inflammation in some of the viscera is produced, and a dangerous disease established.

Symptoms—The following are the symptoms of the simple fever—shivering succeeded by loss of appetite, dejected appearance, quick pulse, hot mouth, and a degree of debility; the horse is generally costive, and voids his urine with difficulty; sometimes the disease is accompanied with quickness of breathing, and in a few cases, with pain in the bowels, or symptoms of colic.

Cure.—As soon as a horse is attacked by the disease, let him be bled freely, and if bound in the bowels, give a pint of castor oil, and several warm clysters composed of water and oil; the fever powders to be given in bran mashes if he takes them, if not, give the following in a ball every day until he gets a change for the better :—

Tartar Emetic	1	drachm.
Nitre	3	,,
Camphor	1	,,
Digitalis	1	,,

If the bowels are not open, let him have one drachm of aloes in the above ball each time until they are.

Symptomatic fever is generally occasioned by high feeding, close stables, and a want of proper exercise; sometimes, however, a sudden transition from a cold to a hot temperature is evidently the cause of it; when a fever is symptomatic, it is not preceded by shivering, nor is it so sudden in its attack as the simple fever, but when it is not subdued by an early application of remedies, the symptoms gradually increase in violence, until they present a very formidable appearance.

The symptomatic fever has many symptoms, in common with the simple fever, which are, loss of appetite, quick pulse, dejected appearance, hot mouth, and debility; and if to these are joined difficulty of breathing, and a quick working of the flanks, with coldness of the legs and ears, we may conclude that inflammation of the lungs is the cause of the fever.

If the horse hangs down his head in the manger, or leans back upon his collar, with a strong appearance of being drowsy, the eyes appearing watery and inflamed, it is probable that the fever depends upon an accumulation of blood in the vessels of the brain, and that the staggers are approaching. When the symptoms of fever are joined with a yellowness of the eyes and mouth, an inflammation of the liver is indicated. Should an inflammation of the bowels be the cause, the horse is violently griped; when inflammation of the bladder is the cause, the horse is frequently staling, voiding only very small quantities of urine, and that with considerable pain. Large wounds, and particularly those of joints, will also produce symptomatic fever. In all cases of fever, the horse should be bled freely, and give a purgative ball, composed of the following:—

Aloes	6	drachms.
Calomel	1	,,
Castile Soap	3	,,

Made into a ball.

And after the purging is set, give the following fever ball every day for a week:—

Tartar Emetic	1	drachm.
Digitalis	½	,,
Camphor	1	,,
Nitre	2	,,

The horse to have bran mashes, gentle exercise, and well clothed.

Diarrhea.

Causes.—This disorder may proceed from a defective perspiration, from an increased secretion of bile, from too violent exertion, or from hard riding, over feeding, or eating unwholesome food, and sometimes from a morbid change in the secretion of the stomach and intestines. It may also proceed from drinking immediately of cold water when heated, or occasionally from worms; sometimes it is the critical termination of a disease, in which case it proves salutary, and ought not be suddenly checked.

Symptoms.—This disease is indicated by a constant and copious discharge of dung, accompanied with pain, restlessness, and loss of appetite. As the disorder increases, the discharge is chiefly mucous, or mixed with small hard lumps of dung, covered with greasy matter. When this disease has been neglected, and evacuation becomes involuntary, attended with coldness of the extremeties, a fatal termination will generally ensue. This disease is most prevalent in winter or cold weather.

Cure.—Both astringents and violent purges are improper in this disease—such medicine as invigorates the intestines should only be employed; a drink may be given every morning, for two or three mornings, composed of

Castor Oil	6	ounces.
Tincture of Opium	½	,,

In two quarts of thick gruel.

The horse should be kept warm, his diet should consist of bran and gruel, or malt, and his drink should be of thin gruel. After the complaint has been somewhat removed, the following ball may be given every day till perfectly recovered :—

Sulphate of Iron	1	drachm.
Gention Root, powdered	2	,,
Ginger	2	,,

Falling of the Fundament.

Horses of a delicate constitution are most subject to this complaint; it often arises from long continued looseness, hard riding and driving.

Treatment.—If taken in time, the administration of appropriate remedies removes it, but from inattention and negligence, it is often obstinate. Wrap a bit of rag around the fingers, grease it slightly, then proceed to push up the gut, having first washed it with an astringent lotion, composed of two drachms of sulphate of zinc, or the same quantity of alum, dissolved in a half-pint of wine or water.

A more dilute solution of either these astringents may be injected twice a day, but should inflammation be developed by this treatment, it would be well to discontinue it, and substitute the following, which is more adapted for the inflammatory condition of the mucous membrane of the rectum.

Sugar of Lead	1	drachm.
Water	1	pint.
Vinegar.....	1	drachm.

The occasional substitution of an ointment for the preceding injection, is accompanied with the best effects. The following is the form :—

Sugar of Lead.....	1	ounce.
Marsh Mallowes Ointment.....	1	pound.

Mixed.

Violent purgative should be avoided, but bran mashes may be given instead, to induce regular evacuations.

Falling of the Penis.

This complaint is occasioned by the total relaxation, and consequent weakness of the muscles and ligaments intended to sustain it in its natural condition.

Over-worked horses, and particularly stallions which have covered too many mares, are subject to this complaint.

Treatment.—In slight cases the penis may be returned within its sheath, and charged repeatedly in the course of the day with cold water, or a saturated solution of common salt in water.

The muscles may be anointed with the following liniment:—

Prepared Hogs' Lard.....	4 ounces.
Oil of Turpentine	1 ,,

Melt the lard in a vessel over a slow fire, then add the turpentine, stir until they are thoroughly incorporated, when it is ready for use.

Should the disease prove obstinate, bolster up the penis, and apply a charge over the back of the sheath, leaving ample room for the horse to urinate.

When the disease is accompanied by debility, administer cordials and tonics.

CLASS VIII.

BONE SPAVIN — BOG SPAVIN — BLOOD SPAVIN — CURB — CAPPED HOCKS — THE THOROUGH PIN — SWELLED LEGS — LAMENESS IN THE SHOULDER.

Bone Spavin.

This disease generally attacks diseased horses, and is situated on the upper end of the shank bone of the hind leg, either below or in the middle of the hock joint. Horses with their hind-legs much bent at the hock, and termed cow-hocked, are more subject to this affection, since the stress is increased upon that part by its angularity, which, if not speedily removed, may prove incurable. In the inflammatory state, or during the first attack of the bone spavin, the lameness will disappear for a short time after the horse has been exercised, and by this circumstance, the bone spavin is distinguished from lameness in any other part of the limb.

Remedies.—Spavins can only be successfully treated, if at all, by blisters frequently repeated, which may induce an absorption of the long deposit; when this fails, then have recourse to firing, and if firing proves ineffectual, no other means is likely to succeed. The animal to have a diuretic ball every week after being fired for a month, composed as follows:—

Nitre	3	drachms.
Resin	3	,,

Bog Spavin.

This disease is more frequent than the blood spavin, and generally proceeds from similar causes.

Symptoms.—Nearly the same symptoms are generally apparent in this case as the preceding. It is attended with a slight inflammation, which causes enoysted swelling or enlargement of the capsules or membraneous bags, that contain and afford the synonoira that lubricates the joints at the upper and inner side of the hock.

Remedy.—This, like bone spavin, admits but of a limited degree of treatment; repeated blisters are the most likely to afford relief, and if all fails, firing is the last remedy.

Blood Spavin.

Causes.—This generally arises in consequence of hard work, and over-straining and exertion, or from bruises or other local injuries on the parts, causing considerable weakness.

Symptoms.—It appears like a small soft swelling or enlargement of the thigh vein, in that part where it runs over the inside of the hock joint, and is easily distinguished by its giving way, and disappearing in in some measure, on pressure below it, and returning again on its removal.

Cure.—Standing in a running stream, morning and evening, for one hour at the time, and half an hour's hard rubbing after being properly dried; continue this treatment for three weeks; when hand-rubbing the parts affected, wet your hands with the following astringent lotion:—two pounds oak bark, boiled for two hours, one quart of salt, and three ounces alum.

The Curb.

Causes.—This disease usually occurs from protracted and excessive working on the road, or from local injury done to the parts, and it is also hereditary.

Symptoms.—The curb is common in horses, especially such as are cow-hoofed, and appears in swelling on the back part of the hock; it generally causes a degree of lameness, in proportion to the inflammation of the parts, and which rarely gives way of its own accord.

Cure.—In most cases where curbs are not of too long standing, they may be removed by the application of a blister, or iodine ointment, but in inveterate cases, firing is the only remedy.

Capped Hocks.

The point of the hock is swelled, a soft fluctuating tumor appears in it; this is an enlargement of one of those mucous bags of which I have spoken, and which surrounds the insertion of the tendons into the point of the hock. It is usually produced by blows, and in the majority of instances, by injury which the horse inflicts upon himself by kicking; therefore, a horse with capped hock, is properly regarded with a suspicious eye. It also occurs sometimes by the bedding of the horse being too thin, and the hock may be bruised in consequence, and it may besides proceed from a sprain of the hock joint.

Blistering, fomentation, or any other treatment, will not do; if the case is inveterate, opening and dissecting, by cutting out the small bag that contains the fluid, is the only remedy.

The Thorough Pin.

Cause.—This usually takes place on account of some particular weakness, or relaxation in the ligament surrounding the joints, and when pressed by the finger it disappears, but returns immediately again.

Symptoms.—This is a soft flexible swelling, and appears on the two opposite sides of the hock joint at the same time; being supposed to pass entirely through the joint, thus deriving the name of thorough pin.

Cure.—There is rarely much lameness produced by this disease; the most certain cure is blistering, composed as follows:—

Spanish Flies	4	drachms.
Spirits of Turpentine	1	ounce.
Hogs' Lard	4	,,

Mixed together.

Have the blister rubbed in secondly, if required. If this treatment does not effect a cure, the animal should be fired.

Swelled Legs.

Both the fore and hind legs of horses are liable to considerable swelling, but the latter are most subject to be thus affected. Frequently when a horse seems to be affected with no other disease, the hind legs will suddenly swell to a great extent from the hock to the fetlock, and in some instances, even from the stifle downwards; this is accompanied with heat, and extreme tenderness of the skin, inducing lameness of a peculiar character; a quickened and hard pulse are usual concomitants of this seizure, with a considerable degree of fever. This complaint is acute inflammation of the cellular substance of the limbs, being sudden in its attack, very violent in its degree, and consequently attended with the secretion of a quantity of fluid on the cellular tissue. Young horses, and those which are over-fed, with little exercise, are most liable to be thus attacked. Horses may also have swelled legs from general debility; the limbs being most remote from the centre of circulation, first exhibit loss of power, and this is manifested by swelling, in consequence of the accumulation of fluids in them.

Cure—If accompanied by fever, take 4 quarts of blood away, after which the following diuretic should be given:—

Resin	3	drachms.
Turpentine	4	,,
Ginger	1	,,
Linseed Meal	4	,,

Made into a ball.

Four hours afterwards, give the following purgative in the form of a ball:—

Barbadoes Aloes	6	drachms.
Calomel	1	,,
Oil of Caraways	10	drops.
Castile Soap	1	drachm.

Also use fomentation.

Lameness in the Shoulder.

It is easily distinguished from lameness in any other part, by the horse dragging his toe and moving his foot in an outward circular manner at every step. Fomentation to the part four times a day, one hour at the time, will be found extremely beneficial; the animal should not be allowed to lie down during the time. If lameness appears obstinate, a blister should be applied and repeated, if necessary, composed as follows:—

Spanish Flies	4 drachms.
Spirits of Turpentine	4 ,,
Hogs' Lard	3 ounces.

Mixed together and rubbed on the part for twenty minutes.

CLASS IX.

STRING HALT—BROKEN KNEES—WIND GALLS—SPLINTS—STRAIN IN THE BACK SINEWS—GREASE.

String Halt.

String halt is evidently an affection of some of the nerves which communicate motion to these muscles. It is an irregular action of the nervous energy, but what particular fibre is affected, or what muscle is chiefly spasmed has never been ascertained. The horse's action is unpleasant to the rider, but it cannot be denominated unsoundness; on the contrary, the general opinion of farriers of great experience is, that a horse with string halt has more than usual strength and endurance.

By some it has been supposed to exist in the spinal marrow, and by others, to be situated in the nerves supplying some of the muscles of the leg. No cure has ever been discovered.

Broken Knees.

The treatment of broken knees is a subject of much importance, for many horses are blemished, and others are destroyed by wounds in the knee joint. The horse, when falling, naturally throws his knees forward; they receive all his weight, and are often very much lacerated. The first thing to be done is, by very careful washing with warm water, to cleanse the wound from gravel and dirt; it must then be ascertained whether the joint is penetrated. The grating of the probe on one of the bones of the knee, or the depth to which the probe enters the wounds, will too plainly indicate that the joint has been opened.

The opening of the joint being ascertained, the first and immediate care is to close the orifice, for the fluid which separated, and lubricated the bones of the knee being suffered to escape, they will be brought into contact with, and will rub upon each other; the delicate membrane with which they are covered will be highly inflamed, the constitution will be speedily affected, and a degree of fever will ensue that will destroy the horse, while, in the mean time, of all the tortures that can be inflicted on the animal, none can equal that which accompanies inflammation of the membranes lining the joints.

The manner of closing the orifice must be left to a skilful practitioner, who alone is capable of treating such a case. It may be effected by a compress, enclosing the whole of the wound, and not to be removed for many days, or it may be touched over the lacerated part with a hot iron, and a poultice of linseed meal may then be placed on the part, and the case treated as a common wound. Should the blemish be considerable, a mild blister may be applied over the part, after the wound has healed; it will stimulate the hair to grow rapidly, and lessen the scar.

Windgalls.

Causes.—These most commonly proceed from immoderate labor, working horses too young, or allowing them to stand too much on uneven floors, thereby causing the fetlock joints to remain too long on a stretch, instead of being in a state of relaxation.

Symptoms.—These usually arise in small puffy swellings, or enlargements, immediately above the fetlock joints, and appear in both the fore and hind legs; they are not, however, confined to these parts, but sometimes are met with in the hocks, near the knees, and in other places; existing in most cases, without any degree of pain.

Cure.—In slight cases, washes of strong astringents may be found sufficient to remove them, such as the following:—

Sal Ammoniac	1	ounce.
Sugar of Lead	1	,,
Oak Bark	4	,,
Vinegar	1	quart.

Put into two gallons of water and boiled to two quarts.

The bandage to be put on tight, and kept wet all day, and taken off at night.

If the above treatment will not do, the horse must be fired or blistered.

Splints.

Cause.—The splint generally attacks young horses, especially the fore-legs, and may arise from their being more exposed to concussion, the weight of the body being thrown upon them during progression.

Symptoms.—This disease is generally apparent on the side of the shank bone, sometimes in the middle, and sometimes just below the knee. An enlargement of the bone will frequently take place. It is sometimes situated under a ligament or tendon, and very often

attended with a degree of inflammation. When they are seated in the middle part of the shank-bone, they are less painful and dangerous than when they are formed on the back parts of them; and when near the joints, they are more productive of lameness.

Cure.—In young horses, splints sometimes disappear of their own accord, being absorbed by a natural action of the vessels, but the result should never be depended upon; the most effectual remedy is the following:—

Benedoid of Mercury	1	drachm.
Iodine	1	,,
Spanish Flies	30	grains.
Lard	1	ounce.

Mixed together, and rubbed in, three minutes every day, for eight days, and also fomented with very hot water, half an hour every day, before the ointment is rubbed in.

The above treatment cannot be surpassed.

Strain in the Back Sinews.

These tendons are enclosed in a sheath of dense cellular substance, in order to confine them in their situation, and to defend them from injury between the tendon on the sheath, there is a mucous fluid to prevent friction; but when the horse has been over-worked, or put to sudden and violent exertion, the tendon presses upon the delicate membrane lining the sheath, and inflammation is produced; a different fluid is then thrown out which coagulates, and adhesions are formed between the tendon, and the sheath, and the motion of the limb is more difficult and painful. At other times, from violent or long continued exertion, some of the fibres which confine the tendons are ruptured. A slight injury of this nature is called a sprain of the back sinews or tendons, and when it is more serious, the horse is said to have broken down.

It should be remembered, however, that the tendons can never be sprained, because they are inelastic and

incapable of extension, and the tendon or sheath are scarcely ever ruptured, even in what is called breaking down. In every serious affection of this kind, care should be taken that the local inflammation does not produce general disturbance of the system, and therefore the horse should be bled in the toe, and have a dose of physic, when the blood begins to appear; the vein may be more freely opened by a small lancet thrust horizontally under the sole, and almost any quantity of blood may be easily procured. The immersion of the foot in warm water will cause the blood to flow more rapidly; a sufficient quantity having been drawn, a bit of tow should be placed in the groove, and a shoe tacked on by which the heels may be raised from the ground, and much tension removed from the sinews; the bleeding will thus be immediately stopped, and the wound will be readily healed.

The leg should be well fomented three times a day with hot water, and half an hour at the time between the fomentation—the leg should be poulticed with linseed meal; should there, however, remain the slightest enlargement, the leg must be blistered, and if there remain a callous enlargement after the blister, the horse must be fired. The principal use of firing is to rouse the absorbents to such increased action that they will take up and remove the diseased thickness of the skin, and likewise the unnatural deposit in the cellular substance beneath.

Grease.

This is a disease of the skin of the heels, sometimes in the fore-feet, but most commonly in the hind ones.

The disease is too frequently the effect of washing the limbs with cold water, while they are over-heated from exercise, and allowing them to dry of their own accord; the consequence is, the reaction after the application of cold being very great, produces inflammation, or it may be caused by constitutional debility.

Symptoms.—The approach of this disease is indicated by the horse rising his feet frequently from the ground, and evincing great pain and uneasiness when resting upon it.

Swelling and inflammation of the heels about the fetlock follow, which afterwards breaks out, and discharges an oily matter of a peculiar offensive smell; when the inflammation is extended to the cellular membrane under the skin, the pain and lameness are very severe. The affected part is soon brought to an abscess, and bursting leaves a deep ill-looking ulcer.

Cure.—The following astringent lotion may be applied with great benefit:—

Vinegar	1 pint.
Sal Ammonia	1 ounce.
Sugar of Lead	1 pound.
Oak Bark	4 ounces.

The bark to be put into a gallon of water, and boiled to two quarts over a slow fire. When boiled, add the whole together, and wash the part affected four times a day; at the same time, give the following every second day for a week, viz.: —

Turpentine	½ ounce.
Nitre	2 drachms.
Ginger	3 ,,
Linseed Meal	1 ,,

After seven days, give a purgative as follows:—

Barbadoes Aloes	6 drachms.
Calomel	1 ,,
Castile Soap	1 ,,
Oil of Caraways	10 drops.

The animal to be fed on boiled barley, or bran mashes. When it is healing, an ointment composed of

Resin	1 ounce.
Calomel	1 ,,
Lard	3 ,,

Melt the lard and resin together, and when cold, add the calomel and stir them together.

CLASS X.

CONTRACTION OF THE FEET—TREAD, OR OVER-REACH—NAVICULAR JOINT DISEASE—SAND CRACK—QUITTOR—CORNS—BITE OF A MAD DOG.

Contraction of the Feet.

To enable persons to judge of the perfect and healthy state of the foot of the horse, they should examine the feet of young horses in the natural condition, which have not been shod, or worked in any way. It will be found that their feet are nearly circular, and are somewhat wider towards the quarters; this form, however, seldom continues long, for the foot increases in length, and gradually becomes narrow in the quarters, more especially at the heel, when the frog becomes contracted.

Causes.—If the owners of horses would look carefully into their general stable management, their horses would be afflicted with fewer diseases. One of the chief causes of contractions in the hoofs, is neglect of paring; the crust of the hoof, like all other horny parts of the animal system, is continually growing, and consequently lengthens, while the sole becomes thicker. As nature never intended that horses should be shod, this is a beautiful provision for the wear and tear of the hoofs; but when the hoof is protected by a shoe, it is prevented from being worn down by the friction of coming in

contact with the ground; the consequence is, that the hoof gets high in front, and the sole becomes thick as the expansion and descent of the sole and heel are interrupted, and thus contraction is induced.

To obviate this, the smith ought carefully pare the sole, and lower the heels each time the horse is shod; no doubt the thinning of the sole is attended with considerable labor, and without this is attended to, lowering of the heels cannot be accomplished, so that in avoiding the first, both are neglected. It is a great mistake for persons to allow the shoes of horses to remain on longer than three weeks, or a month; whether the shoes are worn or not, they should be taken off, and the soles and heels trimmed and pared; without this precaution, the feet must become malformed. Contraction is also caused by want of natural moisture. It will be seen that horses at grass are seldom or ever afflicted with this evil, in consequence of the hoofs being kept cool and moist by the grass, and occasional showers, by which their natural elastic condition is preserved, and consequently its expansive energy.

The species of contraction which occasions permanent lameness, generally proceeds from another cause, and is not only sudden in its attack, but also extreme in its nature; this is inflammation of the small plates which cover the coffin bone. This inflammation is not violent as in acute founder, but it speedily assumes a serious character, and terminates in distressing results, and thus we see that it proceeds from causes which were concealed from our view.

Symptoms.—Horses which are lame from contraction always stand with one foot before the other, the lame foot being placed forward, but if both feet are affected, then he will change feet alternately. When a horse with this complaint is taken out of the stable, it will be detected by the peculiar shortness, and quickness of his step, and he will place his feet very gently upon the ground, and if trotted, he will hardly clear the surface

as he moves along, so that he is apt to come down on any uneven place on the road, and will be constantly stumbling with the smallest irregularity of surface.

Remedies.—Many have seen the inventions to prevent and retard the progress of this disease; the medical remedy should not be intrusted to any but professional horse doctors, because the chief thing to be done is to remove the inflammation which exists, and this is best effected by local bleeding, and doses of physic; the sole should be pared as much as it will bear, the quarters should then be deeply rasped, taking care not to penetrate so deep as the caronery ring. The toe ought next to be rasped and shortened, and likewise scored. Wet clay ought to be so placed in the stall that the horse will stand in it all day, and at night a plentiful supply of wet clothes should be tied round the foot. When shod, have no nails driven in the inside quarter of the shoe.

Tread, or Over-reach.

This is nearly connected with false quarter, and comprehends wounds and bruises of the caronet, usually the effects of the horse setting one foot upon the other, which frequently happens in the hind-feet, also, by the hind-feet over-reaching the heel when in rapid motion, and wounding it.

Remedies.—Although this is not in general a very serious injury, yet it should be immediately and carefully attended to; the first thing is to wash out the sand or dirt which may have got into the wound, and dry the feet thoroughly with a cloth, after which a pledget of tow wetted with friars balsam, should be firmly bound over the wound, which usually proves a speedy cure. Ignorant quacks are in the habit of applying caustic to wounds of the feet; this should on no account be permitted, as it is very apt to injure the coronary ligament so as to render it incapable of afterwards secreting healthy horn.

The Navicular Joint Disease.

Behind and beneath the lower pastern bone, and behind and above the heel of the coffin bone, is placed a small bone, called the navicular bone. The use of this bone is to support and strengthen the union between the lower pastern and the coffin bone, and to assist the flexor tendon in its action as it passes over it, in order to be inserted into the bottom of the coffin bone, and forms a joint with that tendon.

Cause.—Like many other complaints of the horse, this is often induced by sudden and violent exercise after the animal has been allowed to stand in the stable inactive, the parts not being for some time adapted to overstrained action, or may be too much play between the bone and the tendon, or the cartilage of the bone may be inflamed, and thus produce destruction of it, and cause a lameness of the most painful nature; from the navicular bone being so obscurely situated, it is difficult to ascertain, by inspection, where it is diseased, and this has puzzled many to find out the cause of lameness emanating from it, and has too often been attributed to the shoulder.

Cure—Like some other diseases incidental to the horse, the cure of this is very uncertain, except treated in the following manner. Take two quarts of blood from the toe vein, and blister all round the coronet, have the blister repeated, if necessary, and put on a thick-heeled shoe. The animal should have a causative ball the same time, composed as follows :—

Barbadoes Aloes	5	drachms.
Calomel	1	,,
Castile Soap	2	,,
Oil of Caraways	2	drops.

The ball should be formed with a little linseed meal and treacle. This disease is altogether of so delicate a nature, that I would not advise its cure to be attempted

by any unskilful person, as it is one of those which can only be successfully treated by experienced horse doctors.

Sand-Crack.

This is a down crack in the hoof, and it may occur either in the fore or hind feet. In the fore-feet, they are usually found in the inner quarter. The reason why the quarters are most liable to this is, that the chief stress of the foot is where it expands, and the inner quarter is weaker than the outer. It indicates a brittleness of the crust, which is an extremely bad defect, and is caused by a want of that nutriment necessary to keep the crust supple. It also proceeds from disease in the foot, and it may occur from a false step, or over exertion.

Cure.—If the crack has penetrated through the crust, and lameness has ensued, the case is more serious; it must be carefully examined, to ascertain that no dirt or sand has got into it. The edges must be considerably thinned, and if any fungus is beginning to sprout through the crack, it must be destroyed by the application of the butyn of antimony; the iron must then be run across between hair and hoof—and again, one inch lower down, a pledget of dry tow must be placed in the crack, with another over it, and the whole bound down as tight as possible; also, have the part over the crack blistered to encourage the growth of horn. The fifth day the part should be examined and dressed again, the horse to have physic.

Quittor.

A wound of the coronet, whether it proceeds from a tread or otherwise, should be carefully and immediately attended to; because if sand or gravel gets into the wound, it is likely to produce those deep-seated ulcerations, that are termed pipes or sinews, which constitute the disease called quittor. If quittor arises from a wound in the lower portions of the foot, the matter

which is collected in it, after the ulcer has ripened, being confined there, issues from it, and induces a separation between the horny and fleshy sole; and having accumulated in considerable quantity, at length discharges itself at the coronet, generally close to the quarter. This, however, does not manifest itself to any extent, as both the aperture and quantity of matter which oozes out, are apparently so insignificant, that they will lead an inexperienced person to suppose the discharge of little consequence. In this, however, they will be sadly mistaken, for most serious mischief lurks within, and the difficulty of removing it is extremely great. In this state of the disease, although the fistula is of very small dimensions, yet, the effects of this confined matter, will have extended over almost the entire quarter, and the horny sole may be separated from the hoof.

Remedies.—It must be evident that this is a case which can only be treated by a professional man. In most cases, it becomes necessary to remove the greater portion of the horny sole, and thereafter restore the healthy state of the tender surface beneath. When this has been effected, the horse will quickly be reproduced; but in cases where much of the sole has been removed, it will take at least four or five months to restore that which has been removed, so that the horse may again be subjected to labor.

To restore the healthy condition of the foot, very active means must be adopted; sulphate of copper, ground very fine will destroy the ulcerated surface; to ascertain the state of the disease a probe must be used, and if it touches any of the bones, it is doubtful whether a cure can be effected even by the most skilful.

Quittor often proceeds from neglected bruises and injuries of the sole of the foot. When horses have flat feet, and are ridden quickly over a rough, uneven stony road, the feet are very liable to be injured, and especially by getting a small stone between the shoe and the sole.

Narrow webbed shoes are frequently the cause of bruises of the feet, by leaving the sole rather unprotected; another cause is, the smith paring too much of the sole, or pricking him whilst putting on the shoe.

Corns.

This disease of the foot is termed corns, bearing the resemblance to the corn of a human being. It has a red appearance, and is more spongy and softer than any other part. The horse flinches when this portion of the horn is pressed upon, and there is occasional or permanent lameness. When it is neglected, so much inflammation is produced in that part of the sensible sole, that suppuration follows, and to that quittor, and the matter either undermines the horny sole, or is discharged at the coronet. When the foot becomes contracted, the part of the sole enclosed between the external crust which is wrung in, and the bars which are opposing that contraction, is squeezed, as it were in a vice, and becomes inflamed, hence it is rare to see a contracted foot without corns. In the great majority of cases, the corn is confined to the inner quarter of the foot or crust.

Remedies.—When a corn first appears, it is not difficult, by proper means, to remove it completely, but when it has existed for some time, the injured parts become weakened, and the diseased action of throwing out blood, instead of secreting horn, becomes familiar to them. As soon, therefore, as it is discovered, the cure should be immediately attempted; first, by removing with a fine drawing knife, every portion of the diseased horn around, and the whole of the extravasation likewise, avoiding, however, to wound the sensible sole underneath; having done this, introduce any caustic liquid, as butter of antimony, into the opening, which will act on the sensible sole, by destroying the unsound parts, and stimulating the remainder to a healthy secretion of horn.

If any contraction of the heels occur, they should be slightly thinned to relieve the pressure, and without this, it is probable a cure will not be effected. A bar shoe may be used, laid off the heels, and taking its bearing on the frog. In a week or ten days, the part will have gained sufficient strength, when the horse may be put to grass.

Bite of a Mad Dog.

This awful, and mostly fatal disease, ranks among those which affect the nervous system.

It results from the bite of a mad or rabid animal. The poison of the saliva remains in the wound for an uncertain period, varying from three to eight weeks, and then begins to produce the dreadful effects.

When the disease is fully developed, the horse is highly excited, he kicks and plunges in the most violent manner, and attempts to bite other horses, or even his attendants.

The thirst is excessive, and the act of swallowing invariably accompanied by a gulping effort.

The disease seldom goes beyond the third day. Post mortem appearances.—Inflammation at the back of the mouth, top of the wind pipe, and also of that connecting link of the brain, and spinal cord, called the medulla obbongata.

Treatment.—The most effectual treatment, and the only one, on which reliance can be placed is, to cut out at once the bitten part, and cauterize it with caustic, or a red hot iron.

The following internal medicine may be given, and the adjacent parts also rubbed with it, three successive times the day before full moon.

Satin Leaves, powdered.....	2	drachms.
Peioter, powdered	2	ounces.
Rue Leaves, powdered	3	,,
Garlic, powdered	3	,,

Also the wound may be dressed with ointment, composed as follows:—

Bees Wax	3	ounces.
Black Pitch	1	,,
Resin	4	,,
Common Turpentine	3	,,

Dissolve them together over a slow fire, then add spirits of turpentine, four ounces.

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ERRATA.

Page.	Line.	For.	Read.
9	35	seventeenth	seventh.
57	30	roof	hoof.
63	35	bandaged	tied up.
65	27	tear	sear.
86	2	daublin	doubling.
145	19	one ounce	once.
146	3	Catheicu	Cathecu.